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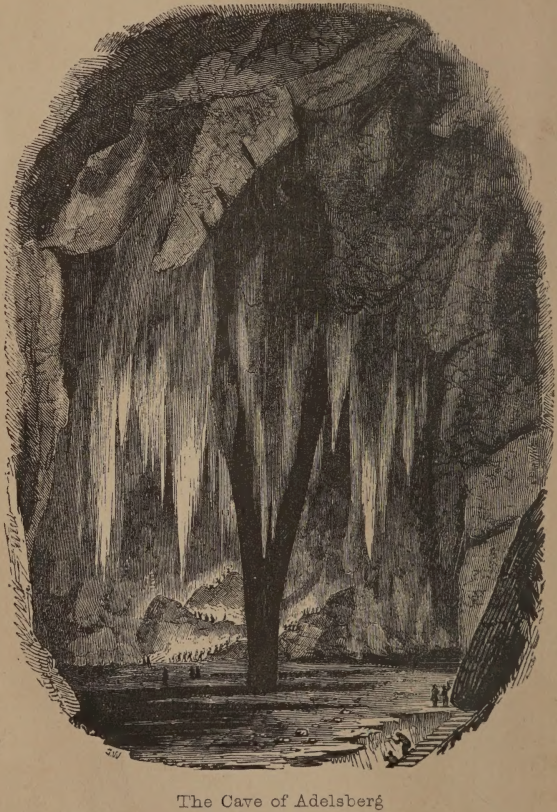

The Cave of Adelsberg

From a Sketch by James Skene, Esq., of Rubislaw.

# CONSOLATIONS IN TRAVEL;

OR,

## THE LAST DAYS OF A PHILOSOPHER.

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By SIR HUMPHRY DAVY, Bart.

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*By the same Author,*

SALMONIA; OR, DAYS OF FLY FISHING.

Illustrations. Fcap. 8vo. $1·50.

## ADVERTISEMENT TO THE FIFTH EDITION.

As is stated in the Preface which follows, this work was composed during a period of bodily indisposition;—it was concluded at the very moment of the invasion of the Author's last illness. Had his life been prolonged, it is probable, that some additions and some changes would have been made. The editor does not consider himself warranted to do more than give to the world a faithful copy, making only a few omissions and a few verbal alterations. The characters of the persons of the Dialogue were intended to be ideal, at least in great part;—such they should be considered by the reader; and, it is to be hoped, that the incidents introduced, as well as the persons, will be viewed only as subordinate and subservient to the sentiments and doctrines. The first edition, which was published in 1830, it may be mentioned, was dedicated to that most amiable and worthy of men, the late Thomas Poole, Esq., of Nether Stowey, then alive, "in remembrance of thirty years of continued and faithful friendship;" and as stated in the advertisement to that edition, the words were those dictated by the author "at a time when he had lost the power of writing, except with extreme difficulty, owing to a paralytic attack, although he retained in a very remarkable manner all his mental faculties unimpaired and unclouded."

J. D.

Lesketh How, Ambleside,
*Nov.* 27, 1850.

# PREFACE.

SALMONIA was written during the time of a partial recovery from a long and dangerous illness. The present work was composed immediately after, under the same unfavourable and painful circumstances, and at a period when the constitution of the author suffered from new attacks. He has derived some pleasure and some consolation, when most other sources of consolation and pleasure were closed to him, from this exercise of his mind; and, he ventures to hope that these hours of sickness may be not altogether unprofitable to persons in perfect health.

ROME, *February* 21, 1829.

# CONTENTS.

## DIALOGUE I.

Page
THE VISION . . . . . . . . . 3

## DIALOGUE II.

DISCUSSIONS CONNECTED WITH THE VISION IN THE COLOSSEUM . . . . . . . . . 66

## DIALOGUE III.

THE UNKNOWN . . . . . . . . . 115

## DIALOGUE IV.

THE PROTEUS, OR IMMORTALITY . . . . . 176

## DIALOGUE V.

THE CHEMICAL PHILOSOPHER . . . . . 236

## DIALOGUE VI.

POLA, OR TIME . . . . . . . . . . 271

# LIST OF ENGRAVINGS.

Page

THE CAVE OF ADELSBERG . . . . *Frontispiece.*

COLOSSEUM . . . . . . . . . . 3

VESUVIUS . . . . . . . . . . 66

PÆSTUM . . . . . . . . . . 11[illegible]

THE AUSTRIAN ALPS FROM GOSAU . . . . 176

PROTEI . . . . . . . . . . 197

THE TRAUN SEE OR LAKE OF GMÜNDEN . . . 236

POLA . . . . . . . . . . 271

# CONSOLATIONS IN TRAVEL;

OR,

# THE LAST DAYS OF A PHILOSOPHER.

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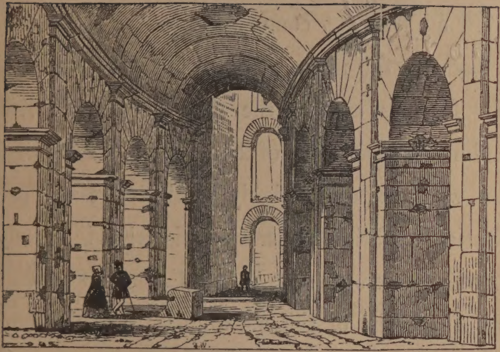


Colosseum.

# DIALOGUE THE FIRST.

## THE VISION.

I PASSED the autumn and the early winter of the years 18— and 18— at Rome. The society was as is usual in that metropolis of the old Christian world numerous and diversified. In it there were found many intellectual foreigners, and amongst them some distinguished Britons, who had a higher object in making this city their residence than mere idleness or vague curiosity. Amongst these my countrymen there were two gentlemen with whom I formed a particular intimacy, and who were my frequent companions in the visits which I made to the monuments of the grandeur of the old Romans and to the masterpieces of ancient and modern art. One of them I shall call Ambrosio. He was a man of highly cultivated taste, great classical erudition, and minute historical knowledge. In religion he was of the Roman Catholic persuasion; but a Catholic of the most liberal school, who in another age might have been secretary to Ganganelli. His views upon the subjects of politics and religion were enlarged; but his leaning was rather to the power of a single magistrate than to the authority of a democracy or even of an oligarchy. The other friend, whom I shall call Onuphrio, was a man of a very different character. Belonging to the English aristocracy, he had some of the prejudices usually attached to birth and rank; but his manners were gentle, his temper good, and his disposition amiable. Having been partly educated at a northern university in Britain, he had adopted views in religion which went even beyond toleration, and which might be regarded as entering the verge of scepticism. For a patrician he was very liberal in his political views. His imagination was poetical and discursive, his taste good, and his tact extremely fine,—so exquisite, indeed, that it sometimes approached to morbid sensibility and disgusted him with slight defects, and made him keenly sensible of small perfections to which common minds would have been indifferent.

In the beginning of October, on a very fine afternoon, I drove with these two friends to the Colosseum, a monument which, for the hundredth time even, I had viewed with a new admiration; my friends partook of my sentiments. I shall give the conversation which occurred there in their own words. Onuphrio said, "How impressive are these ruins!—what a character do they give us of the ancient Romans, what magnificence of design, what grandeur of execution! Had we not historical documents to inform us of the period when this structure was raised, and of the purposes for which it was designed, it might be imagined the work of a race of giants, a council-chamber for those Titans fabled to have warred against the gods of the pagan mythology. The size of the masses of travertine of which it is composed is in harmony with the immense magnitude of the building. It is hardly to be wondered at that a people who constructed such works for their daily sports, for their usual amusements, should have possessed strength, enduring energy and perseverance, sufficient to enable them to conquer the world. They appear always to have formed their plans and made their combinations as if their power were beyond the reach of chance, independent of the influence of time, and founded for unlimited duration—for eternity!"

Ambrosio took up the discourse of Onuphrio, and said, "The aspect of this wonderful heap of ruins is so picturesque, that it is impossible to regret its decay; and at this season of the year the colours of the vegetation are in harmony with those of the falling masses; and how perfectly the whole landscape is in tone! The remains of the palace of the Cæsars and of the golden halls of Nero appear in the distance, their gray and tottering turrets and their moss-stained arches reposing, as it were, upon the decaying vegetation: and there is nothing that marks the existence of life except the few pious devotees, who wander from station to station in the arena below, kneeling before the cross, and demonstrating the triumph of a religion, which received in this very spot, in the early period of its existence, one of its most severe persecutions, and which, nevertheless, has preserved what remains of that building, where attempts were made to stifle it almost at its birth; for, without the influence of Christianity, these majestic ruins would have been dispersed or levelled to the dust. Plundered of their lead and iron by the barbarians, Goths and Vandals, and robbed even of their stones by Roman princes, the Barberini, they owe what remains of their relics to the sanctifying influence of that faith which has preserved for the world all that was worth preserving;—not merely arts and literature, but likewise that which constitutes the progressive nature of intellect, and the institutions which afford to us happiness in this world and hopes of a blessed immortality in the next. And, being of the faith of Rome, I may say, that the preservation of this pile by the sanctifying effect of a few crosses planted round it, is almost a miraculous event. And what a contrast the present application of this building, connected with holy feelings and exalted hopes, is to that of the ancient one, when it was used for exhibiting to the Roman people the destruction of men by wild beasts, or of men, more savage than wild beasts, by each other, to gratify a horrible appetite for cruelty, founded upon a still more detestable lust, that of universal domination! And who would have supposed, in the time of Titus, that a faith, despised in its insignificant origin, and persecuted, from the supposed obscurity of its founder and its principles, should have reared a dome to the memory of one of its humblest teachers, more glorious than was ever framed for

Jupiter or Apollo in the ancient world; and have preserved even the ruins of the temples of the pagan deities; and have burst forth in splendour and majesty, consecrating truth amidst the shrines of error; employing the idols of the Roman superstition for the most holy purposes, and rising a bright and constant light amidst the dark and starless night which followed the destruction of the Roman empire!"

Onuphrio now resumed the discourse: he said, "I have not the same exalted views on the subject which our friend Ambrosio has so eloquently expressed. Some little of the perfect state in which these ruins exist may have been owing to causes which he has described; but these causes have only lately begun to operate, and the mischief was done before Christianity was established at Rome. Feeling differently on these subjects, I admire this venerable ruin rather as the record of the destruction of the power of the greatest people that ever existed, than as a proof of the triumph of Christianity;

and I am carried forward in melancholy anticipation, to the period when even the magnificent dome of St. Peter's will be in a similar state to that in which the Colosseum now is, and when its ruins may be preserved by the sanctifying influence of some new and unknown faith; when, perhaps, the statue of Jupiter, which at present receives the kiss of the devotee, as the image of St. Peter, may be employed for another holy use, as the personification of a future saint or divinity; and when the monuments of the papal magnificence shall be mixed with the same dust as that which now covers the tombs of the Cæsars. Such, I am sorry to say, is the general history of all the works and institutions belonging to humanity. They rise, flourish, and then decay and fall; and the period of their decline is generally proportional to that of their elevation. In ancient Thebes or Memphis the peculiar genius of the people has left us monuments from which we can judge of their arts, though we cannot understand the nature of their superstitions. Of Babylon and of Troy the remains are almost extinct; and what we know of these famous cities is almost entirely derived from literary records. Ancient Greece and Rome we view in the few remains of their monuments; and the time will arrive when modern Rome shall be what ancient Rome now is; and ancient Rome and Athens will be what Tyre or Carthage now are, known only by coloured dust in the desert, or coloured sand, containing the fragments of bricks or glass, washed up by the wave of a stormy sea. I might pursue these thoughts still further, and show that the wood of the cross, or the bronze of the statue, decay as quickly as if they had not been sanctified; and I think I could prove that their influence is owing to the imagination which, when infinite time is considered, or the course of ages even, is null and its effect imperceptible; and similar results occur, whether the faith be that of Osiris, of Jupiter, of Jehovah, or of Jesus."

To this Ambrosio replied, his countenance and the tones of his voice expressing some emotion: "I do not think, Onuphrio, that you consider this question with your usual sagacity or acuteness; indeed, I never hear you on the subject of religion without pain and without a feeling of regret that you have not applied your powerful understanding to a more minute and correct examination of the evidences of revealed religion. You would then, I think, have seen, in the origin, progress, elevation, decline and fall of the empires of antiquity, proofs that they were intended for a definite end in the scheme of human redemption: you would have found prophecies which have been amply verified: and the foundation or the ruin of a kingdom, which appears in civil history so great an event, in the history of man in his religious institutions, as comparatively of small moment: you would have found the establishment of the worship of one God amongst a despised and contemned people as the most important circumstance in the records of the early world: you would have found the Christian dispensation naturally arising out of the Jewish and the doctrines of the pagan nations, all preparatory to the triumph and final establishment of a creed fitted for the most enlightened state of the human mind, and equally adapted to every climate and every people."

To this animated appeal of Ambrosio, Onuphrio replied in the most tranquil manner, and with the air of an unmoved philosopher:—"You mistake me, Ambrosio, if you consider me hostile to Christianity. I am not of the school of the French encyclopædists, or of the English infidels. I consider religion as essential to man, and belonging to the human mind, in the same manner as instincts belong to the brute creation; a light, if you please, of revelation to guide him through the darkness of this life, and to keep alive his undying hope of immortality: but pardon me if I consider this instinct as equally useful in all its different forms, and still a divine light through whatever medium or cloud of human passion or prejudice it passes. I reverence it in the followers of Bramah, in the disciple of Mahomet, and I wonder at it in all the variety of forms it adopts in the Christian world. You must not be angry with me that I do not allow infallibility to your church, having been myself brought up by Protestant parents, who were rigidly attached to the doctrines of Calvin."

I saw Ambrosio's countenance kindle at Onuphrio's explanation of his opinions, and he appeared to be meditating an angry reply. I endeavoured to change the conversation to the state of the Colosseum, with which it had begun. "These ruins," I said, "as you have both observed, are highly impressive; yet when I saw them six years ago they had a stronger effect on my imagination; whether it was the charm of novelty, or that my mind was fresher, or that the circumstances under which I saw them were peculiar, I know not, but probably all these causes operated in affecting my mind. It was a still and beautiful evening in the end of May; the last sunbeams were dying away in the western sky, and the first moonbeams shining in the eastern; the bright orange tints lighted up the ruins, and as it were kindled the snows that still remained on the distant Apennines, which were visible from the highest accessible part of the amphitheatre. In this glow of colouring, the green of advanced spring softened the gray and yellow tints of the decaying stones, and as the lights gradually became fainter, the masses appeared grander and more gigantic; and when the twilight had entirely disappeared, the contrast of light and shade in the beams of the full moon, and beneath a sky of the brightest sapphire, but so highly illuminated that only Jupiter and a few stars of the first magnitude were visible, gave a solemnity and magnificence to the scene which awakened the highest degree of that emotion which is so properly termed the sublime. The beauty and the permanency of the heavens and the principle of conservation belonging to the system of the universe, the works of the Eternal and Divine Architect, were finely opposed to the perishing and degraded works of man in his most active and powerful state. And at this moment so humble appeared to me the condition of the most exalted beings belonging to the earth, so feeble their combination, so minute the point of space, and so limited the period of time in which they act, that I could hardly avoid comparing the generations of man, and the effects of his genius and power, to the swarms of luceoli or fire-flies which were dancing around me, and that appeared flitting and sparkling amidst the gloom and darkness of the ruins, but which were no longer visible when they rose above the horizon, their feeble light being lost and utterly obscured in the brightness of the moonbeams in the heavens."

Onuphrio said: "I am not sorry that you have changed the conversation. You have given us the history of a most interesting recollection, and well expressed a solemn though humiliating feeling. In such moments, and among such scenes, it is impossible not to be struck with the nothingness of human glory and the transiency of human works. This, one of the greatest monuments on the face of the earth, was raised by a people, then its masters, only seventeen centuries ago. In a few ages more it will be but as dust. And of all the testimonials of the vanity or power of man, whether raised to immortalise his name, or to contain his decaying bones without a name, no one is known to have a duration beyond what is measured by the existence of a hundred generations; and it is only to multiply centuple for instance the period of time, and the memorials of a village and the monuments of a country churchyard may be compared with those of an empire and the remains of the world."

Ambrosio, to whom the conversation seemed disagreeable, put us in mind of an engagement we had made to spend the evening at the conversazione of a celebrated lady, and proposed to call the carriage. The reflections which the conversation and the scene had left in my mind little disposed me for general society. I requested them to keep their engagement, and said I was resolved to spend an hour amidst the solitude of the ruins, and desired them to send back the carriage for me. They left me, expressing a hope that my poetical or melancholy fancy might not be the occasion of a cold, and wished me the company of some of the spectres of the ancient Romans.

When I was left alone, I seated myself in the moonshine, on one of the steps leading to the seats supposed to have been occupied by the patricians in the Colosseum at the time of the public games. The train of ideas in which I had indulged before my friends left me continued to flow with a vividness and force increased by the stillness and solitude of the scene; and the full moon which has always a peculiar effect on these moods of feeling in my mind, gave to them a wildness and a kind of indefinite sensation, such as I suppose belong at all times to the true poetical temperament. It must be so, I thought to myself;—no new city will rise again out of the double ruins of this;—no new empire will be founded upon these colossal remains of that of the old Romans. The world, like the individual, flourishes in youth, rises to strength in manhood, falls into decay in age; and the ruins of an empire are like the decrepit frame of an individual, except that they have some tints of beauty which nature bestows upon them. The sun of civilisation arose in the East, advanced towards the West, and is now at its meridian;—in a few centuries more it will probably be seen sinking below the horizon even in the new world, and there will be left darkness only where there is a bright light, deserts of sand where there were populous cities, and stagnant morasses where the green meadow or the bright corn-field once appeared. I called up images of this kind in my imagination. "Time," I said, "which purifies, and as it were sanctifies the mind, destroys and brings into utter decay the body; and, even in nature, its influence seems always degrading. She is represented by the poets as eternal in her youth, but amongst these ruins she appears to me eternal in her age, and here no traces of renovation appear in the ancient of days." I had scarcely concluded this ideal sentence, when my reverie became deeper, the ruins surrounding me appeared to vanish from my sight, the light of the moon became more intense, and the orb itself seemed to expand in a flood of splendour. At the same time that my visual organs appeared so singularly affected, the most melodious sounds filled my ear, softer, yet at the same time deeper and fuller, than I had ever heard in the most harmonious and perfect concert. It appeared to me that I had entered a new state of existence, and I was so perfectly lost in the new kind of sensation which I experienced, that I had no recollections and no perceptions of identity. On a sudden the music ceased, but the brilliant light still continued to surround me, and I heard a low but extremely distinct and sweet voice, which appeared to issue from the centre of it. The sounds were at first musical like those of a harp, but they soon became articulate, as if a prelude to some piece of sublime poetical composition. "You, like all your brethren," said the voice, "are entirely ignorant of everything belonging to yourselves, the world you inhabit, your future destinies, and the scheme of the universe; and yet you have the folly to believe you are acquainted with the past, the present, and the future. I am an intelligence somewhat superior to you, though there are millions of beings as much above me in power and in intellect as man is above the meanest and weakest reptile that crawls beneath his feet;—yet something I can teach you: yield your mind wholly to the influence which I shall exert upon it, and you shall be undeceived in your views of the history of the world, and of the system you inhabit." At this moment the bright light disappeared, the sweet and harmonious voice, which was the only proof of the presence of a superior intelligence, ceased; I was in utter darkness and silence, and seemed to myself to be carried rapidly upon a stream of air, without any other sensation than that of moving quickly through space. Whilst I was still in motion, a dim and hazy light, which seemed like that of twilight in a rainy morning, broke upon my sight, and gradually a country displayed itself to my view covered with forests and marshes.

I saw wild animals grazing in large savannahs, and carnivorous beasts, such as lions and tigers, occasionally disturbing and destroying them. I saw naked savages feeding upon wild fruits, or devouring shellfish, or fighting with clubs for the remains of a whale which had been thrown upon the shore. I observed that they had no habitations, that they concealed themselves in caves, or under the shelter of palm trees, and that the only delicious food which nature seemed to have given to them was the date and the cocoa-nut, and these were in very small quantities and the object of contention. I saw that some few of these wretched human beings that inhabited the wide waste before my eyes, had weapons pointed with flint or fish bone, which they made use of for destroying birds, quadrupeds, or fishes, that they fed upon raw; but their greatest delicacy appeared to be a maggot or worm, which they sought for with great perseverance in the buds of the palm. When I cast my eyes on the varied features of this melancholy scene, which was now lighted by a rising sun, I heard again the same voice which had astonished me in the Colosseum, and which said,—"See the birth of Time! Look at man in his newly created state, full of youth and vigour. Do you see aught in this state to admire or envy?" As the last words fell on my ear, I was again, as before, rapidly put in motion, and I seemed again resistless to be hurried upon a stream of air, and again in perfect darkness. In a moment, an indistinct light again appeared before my eyes and a country opened upon my view which appeared partly wild and partly cultivated; there were fewer woods and morasses than in the scene which I had just before seen; I beheld men who were covered with the skins of animals, and who were driving cattle to enclosed pastures; I saw others who were reaping and collecting corn, others who were making it into bread; I saw cottages furnished with many of the conveniences of life, and a people in that state of agricultural and pastoral improvement which has been imagined by the poets as belonging to the golden age. The same voice, which I shall call that of the Genius, said,—"Look at these groups of men who are escaped from the state of infancy: they owe their improvement to a few superior minds still amongst them. That aged man whom you see with a crowd around him taught them to build cottages; from that other they learnt to domesticate cattle; from others to collect and sow corn and seeds of fruit. And these arts will never be lost; another generation will see them more perfect; the houses, in a century more, will be larger and more convenient; the flocks of cattle more numerous; the corn-fields more extensive; the morasses will be drained, the number of fruit-trees increased. You shall be shown other visions of the passages of time, but as you are carried along the stream which flows from the period of creation to the present moment, I shall only arrest your transit to make you observe some circumstances which will demonstrate the truths I wish you to know, and which will explain to you the little it is permitted me to understand of the scheme of the universe." I again found myself in darkness and in motion and I was again arrested by the opening of a new scene upon my eyes. I shall describe this scene and the others in the succession in which they appeared before me, and the observations by which they were accompanied in the voice of the wonderful being who appeared as my intellectual guide. In the scene which followed that of the agricultural or pastoral people, I saw a great extent of cultivated plains, large cities on the sea shore, palaces, forums, and temples ornamenting them; men associated in groups, mounted on horses, and performing military exercises; galleys moved by oars on the ocean; roads intersecting the country covered with travellers and containing carriages moved by men or horses. The Genius now said, "You see the early state of civilisation of man; the cottages of the last race you beheld have become improved into stately dwellings, palaces, and temples, in which use is combined with ornament. The few men to whom, as I said before, the foundations of these improvements were owing, have had divine honours paid to their memory. But look at the instruments belonging to this generation, and you will find that they are only of brass. You see men who are talking to crowds around them, and others who are apparently amusing listening groups by a kind of song or recitation; these are the earliest bards and orators; but all their signs of thought are oral, for written language does not yet exist." The next scene which appeared was one of varied business and imagery. I saw a man, who bore in his hands the same instruments as our modern smith's, presenting a vase, which appeared to be made of iron, amidst the acclamations of an assembled multitude engaged in triumphal procession before the altars dignified by the name of Apollo at Delphi; and I saw in the same place men who carried rolls of papyrus in their hands and wrote upon them with reeds containing ink made from the soot of wood mixed with a solution of glue. "See," the Genius said, "an immense change produced in the condition of society by the two arts of which you here see the origin; the one, that of rendering iron malleable, which is owing to a single individual, an obscure Greek; the other, that of making thought permanent in written characters, an art which has gradually arisen from the hieroglyphics which you may observe on yonder pyramids. You will now see human life more replete with power and activity."

Again, another scene broke upon my vision. I saw the bronze instruments, which had belonged to the former state of society, thrown away; malleable iron converted into hard steel, this steel applied to a thousand purposes of civilised life; I saw bands of men who made use of it for defensive armour and for offensive weapons; I saw these iron-clad men, in small numbers, subduing thousands of savages, and establishing amongst them their arts and institutions; I saw a few men, on the eastern shores of Europe, resisting, with the same materials, the united forces of Asia; I saw a chosen band die in defence of their country, overcome by an army a thousand times as numerous; and I saw this same army, in its turn, caused to disappear, and destroyed or driven from the shores of Europe by the brethren of that band of martyred patriots; I saw bodies of these men traversing the sea, founding colonies, building cities, and wherever they established themselves, carrying with them their peculiar arts. Towns and temples arose containing schools, and libraries filled with the rolls of the papyrus. The same steel, such a tremendous instrument of power in the hands of the warrior, I saw applied, by the genius of the artist, to strike forms even more perfect than those of life out of the rude marble; and I saw the walls of the palaces and temples covered with pictures, in which historical events were pourtrayed with the truth of nature and the poetry of mind. The voice now awakened my attention, by saying, "You have now before you the vision of that state of society which is an object of admiration to the youth of modern times, and the recollections of which, and the precepts founded on these recollections, constitute an important part of your education. Your maxims of war and policy, your taste in letters and the arts, are derived from models left by that people, or by their immediate imitators, whom you shall now see." I opened my eyes, and recognised the very spot in which I was sitting when the vision commenced. I was on the top of an arcade, under a silken canopy, looking down upon the tens of thousands of people, who were crowded in the seats of the Colosseum, ornamented with all the spoils that the wealth of a world can give; I saw in the arena below animals of the most extraordinary kind, and which have rarely been seen living in modern Europe, the giraffe, the zebra, the rhinoceros and the ostrich from the deserts of Africa beyond the Niger, the hippopotamus from the upper Nile, and the royal tiger and the gnu from the banks of the Ganges. Looking over Rome, which, in its majesty of palaces and temples and in its colossal aqueducts bringing water even from the snows of the distant Apennines, seemed more like the creation of a supernatural power than the work of human hands; looking over Rome to the distant landscape, I saw the whole face as it were of the ancient world adorned with miniature images of this splendid metropolis. Where the Roman conquered, there he civilised; where he carried his arms, there he fixed likewise his household gods; and from the deserts of Arabia to the mountains of Caledonia there appeared but one people, having the same arts, language and letters, all of Grecian origin. I looked again, and saw an entire change in the brilliant aspect of this Roman world; the people of conquerors and heroes was no longer visible; the cities were filled with an idle and luxurious population; those farms which had been cultivated by warriors, who left the plough to take the command of armies, were now in the hands of slaves; and the militia of free men were supplanted by bands of mercenaries, who sold the empire to the highest bidder. I saw immense masses of warriors collecting in the north and east, carrying with them no other proofs of cultivation but their horses and steel arms; I saw these savages everywhere attacking this mighty empire, plundering cities, laying waste the monuments of arts and literature, and, like wild beasts devouring a noble animal, tearing into pieces and destroying the Roman power. Ruin, desolation, and darkness were before me, and I closed my eyes to avoid the melancholy scene. "See," said the Genius, "the melancholy termination of a power believed by its founders invincible, and intended to be eternal. But you will find, though the glory and greatness belonging to its military genius have passed away, yet those belonging to the arts and institutions, by which it adorned and dignified life, will again arise in another state of society." I opened my eyes again, and I saw Italy recovering from her desolation; towns arising with governments almost upon the model of ancient Athens and Rome, and these different small states rivals in arts and arms; I saw the remains of libraries, which had been preserved in monasteries and churches by a holy influence which even the Goth and Vandal respected, again opened to the people; I saw Rome rising from her ashes, the fragments of statues found amidst the ruins of her palaces and the imperial villas becoming models for the regeneration of art; I saw magnificent temples raised in this city become the metropolis of a new and Christian world and ornamented with the most brilliant master-pieces of the arts of design; I saw a Tuscan city, as it were, contending with Rome for pre-eminence in the productions of genius; and the spirit awakened in Italy spreading its influence from the south to the north. "Now," the Genius said, "society has taken its modern and permanent aspect. Consider for a moment its relations to letters and to arms as contrasted with those of the ancient world." I looked, and saw, that in the place of the rolls of papyrus, libraries were now filled with books. "Behold" the Genius said, "the printing press; by the invention of Faust the productions of genius are, as it were, made imperishable, capable of indefinite multiplication, and rendered an unalienable heritage of the human mind. By this art, apparently so humble, the progress of society is secured, and man is spared the humiliation of witnessing again scenes like those which followed the destruction of the Roman empire. Now look to the warriors of modern times; you see the spear, the javelin, the shield and the cuirass, are changed for the musket and the light artillery. The German monk who discovered gunpowder, did not meanly affect the destinies of mankind ; wars are become less bloody by becoming less personal, mere brutal strength is rendered of comparatively little avail; all the resources of civilisation are required to maintain and move a large army; wealth, ingenuity and perseverance, become the principal elements of success; civilised man is rendered in consequence infinitely superior to the savage, and gunpowder gives permanence to his triumph, and secures the cultivated nations from ever being again overrun by the inroads of millions of barbarians. There is so much identity of feature in the character of the two or three centuries that are just passed, that I wish you only to take a very transient view of the political and military events belonging to them. You will find attempts made by the chiefs of certain great nations to acquire predominance and empire; you will see those attempts, after being partially successful, resisted by other nations, and the balance of power, apparently for a moment broken, again restored. Amongst the rival nations that may be considered as forming the republic of modern Europe, you will see one pre-eminent for her maritime strength and colonial and commercial enterprise, and you will find she retains her superiority only because it is favourable to the liberty of mankind. But you must not yet suffer the vision of modern Europe to pass from your eyes without viewing some other results of the efforts of men of genius, which, like those of gunpowder and the press, illustrate the times to which they belong and form brilliant epochs in the history of the world. If you look back into the schools of regenerated Italy, you will see in them the works of the Greek masters of philosophy, and if you attend to the science taught in them you will find it vague, obscure, and full of erroneous notions: you will find in this early period of improvement branches of philosophy even applied to purposes of delusion, the most sublime of the departments of human knowledge, astronomy, abused by impostors, who, from the aspect of the planetary world pretended to predict the fortunes and destinies of individuals: you will see in the laboratories alchemists searching for an universal medicine, an elixir of life, and for the philosopher's stone, or a method of converting all metals into gold. But unexpected and useful discoveries you will find even in this age arise amidst the clouds of deception and the smoke of the furnace; delusion and error vanish and pass away, and truths seized upon by a few superior men become permanent, and the property of an enlightening world. Amongst the personages who belong to this early period, there are two whom I must request you to notice, one an Englishman who pointed out the paths to the discovery of scientific truths, and the other a Tuscan, who afforded the happiest experimental illustrations of the speculative views of his brother in science. You will see academies formed a century later in Italy, France, and Britain, in which the sciences are enlarged by new and varied experiments, and the true system of the universe developed by an illustrious Englishman, taught and explained. The practical results of the progress of physics, chemistry, and mechanics, are of the most marvellous kind, and to make them all distinct would require a comparison of ancient and modern states. Ships that were moved by human labour in the ancient world are transported by the winds; and a piece of steel, touched by the magnet, points to the mariner his unerring course from the old to the new world; and by the exertions of one man of genius, aided by the resources of chemistry, a power which, by the old philosophers could hardly have been imagined, has been generated and applied to almost all the machinery of active life. The steam-engine performs not only the labour of horses, but of man, by combinations which appear almost possessed of intelligence;

waggons are moved by it, constructions made, vessels caused to perform voyages in opposition to wind and tide, and a power placed in human hands which seems almost unlimited. To these novel and still extending improvements may be added others, which, though of a secondary kind, yet materially affect the comforts of life, such as the collecting from fossil materials the elements of combustion, and applying them so as to illuminate, by a single operation, houses, streets, and even cities. If you look to the results of chemical arts, you will find new substances of the most extraordinary nature applied to various novel purposes; you will find a few experiments in electricity leading to the marvellous result of disarming the thunder-cloud of its terrors, and you will see new instruments created by human ingenuity, possessing the same powers as the electrical organs of living animals. To whatever part of the vision of modern times you cast your eyes you will find marks of superiority and improvement. And I wish to impress upon you the conviction, that the results of intellectual labour, or of scientific genius, are permanent and incapable of being lost. Monarchs change their plans, governments their objects, a fleet or an army effect their purpose and then pass away; but a piece of steel touched by the magnet, preserves its character for ever, and secures to man the dominion of the trackless ocean. A new period of society may send armies from the shores of the Baltic to those of the Euxine, and the empire of the followers of Mahomet may be broken in pieces by a northern people, and the dominion of the Britons in Asia may share the fate of that of Tamerlane or Zengiskhan; but the steam-boat which ascends the Delaware or the St. Lawrence will continue to be used, and will carry the civilisation of an improved people into the deserts of North America and into the wilds of Canada. In the common history of the world, as compiled by authors in general, almost all the great changes of nations are confounded with changes in their dynasties, and events are usually referred either to sovereigns, chiefs, heroes, or their armies, which do, in fact, originate from entirely different causes, either of an intellectual or moral nature. Governments depend far more than is generally supposed upon the opinion of the people and the spirit of the age and nation. It sometimes happens that a gigantic mind possesses supreme power and rises superior to the age in which he is born, such was Alfred in England and Peter in Russia; but such instances are very rare; and, in general, it is neither amongst sovereigns nor the higher classes of society, that the great improvers or benefactors of mankind are to be found. The works of the most illustrious names were little valued at the times when they were produced, and their authors either despised or neglected; and great, indeed, must have been the pure and abstract pleasure resulting from the exertion of intellectual superiority and the discovery of truth and the bestowing benefits and blessings upon society, which induced men to sacrifice all their common enjoyments and all their privileges as citizens, to these exertions. Anaxagoras, Archimedes, Roger Bacon, Galileo Galilei, in their deaths or their imprisonments, offer instances of this kind, and nothing can be more striking than what appears to have been the ingratitude of men towards their greatest benefactors; but hereafter, when you understand more of the scheme of the universe, you will see the cause and the effect of this, and you will find the whole system governed by principles of immutable justice. I have said that in the progress of society, all great and real improvements are perpetuated; the same corn which, four thousand years ago, was raised from an improved grass by an inventor worshipped for two thousand years in the ancient world under the name of Ceres, still forms the principal food of mankind; and the potato, perhaps the greatest benefit that the old has derived from the new world, is spreading over Europe, and will continue to nourish an extensive population when the name of the race by whom it was first cultivated in South America is forgotten.

"I will now call your attention to some remarkable laws belonging to the history of society, and from the consideration of which you will be able gradually to develop the higher and more exalted principles of being. There appears nothing more accidental than the sex of an infant, yet take any great city or any province, and you will find that the relations of males and females are unalterable. Again, a part of the pure air of the atmosphere is continually consumed in combustion and respiration; living vegetables emit this principle during their growth; nothing appears more accidental than the proportion of vegetable to animal life on the surface of the earth, yet they are perfectly equivalent, and the balance of the sexes, like the constitution of the atmosphere, depends upon the principles of an unerring intelligence. You saw, in the decline of the Roman empire, a people enfeebled by luxury, worn out by excess, overrun by rude warriors; you saw the giants of the North and East mixing with the pigmies of the South and West. An empire was destroyed, but the seeds of moral and physical improvement in the new race were sown; the new population resulting from the alliances of the men of the North with the women of the South was more vigorous, more full of physical power, and more capable of intellectual exertion than their apparently ill-suited progenitors. And, the moral effects or final causes of the migration of races, the plans of conquest and ambition which have led to revolutions and changes of kingdoms designed by man for such different objects, have been the same in their ultimate results,—that of improving by mixture the different families of men. An Alaric or an Attila, who marches with legions of barbarians for some gross view of plunder or ambition, is an instrument of divine power to effect a purpose of which he is wholly unconscious,—he is carrying a strong race to improve a weak one, and giving energy to a debilitated people; and the deserts he makes in his passage will become in another age cultivated fields, and the solitude he produces will be succeeded by a powerful and healthy population. The results of these events in the moral and political world may be compared to those produced in the vegetable kingdom by the storms and heavy gales so usual at the vernal equinox, the time of the formation of the seed; the pollen or farina of one flower is thrown upon the pistil of another, and the crossing of varieties of plants so essential to the perfection of the vegetable world produced. In man, moral causes and physical ones modify each other; the transmission of hereditary qualities to offspring is distinct in the animal world, and in the case of disposition to disease is sufficiently obvious in the human being. But it is likewise a general principle, that powers or habits acquired by cultivation are transmitted to the next generation and exalted or perpetuated. The history of particular races of men affords distinct proofs of this. The Caucasian stock has always preserved its superiority, whilst the negro or flat-nosed race has always been marked for want of intellectual power and capacity for the arts of life. This last race, in fact, has never been cultivated, and a hundred generations, successively improved, would be required to bring it to the state in which the Caucasian race was at the time of the formation of the Greek republics. The principle of the improvement of the character of races by the transmission of hereditary qualities has not escaped the observations of the legislators of the ancient people. By the divine law of Moses, the Israelites were enjoined to preserve the purity of their blood, and there was no higher crime than that of forming alliances with the idolatrous nations surrounding them. The Bramins of Hindostan have established, upon the same principle, the law of caste, by which certain professions were made hereditary. In this warm climate, where labour is so oppressive, to secure perfection in any series of operations, it seems essential to strengthen the powers by the forces acquired from this principle of hereditary descent. It will at first, perhaps, strike your mind, that the mixing or blending of races is in direct opposition to this principle of perfection; but here I must require you to pause and consider the nature of the qualities belonging to the human being. Excess of a particular power, which in itself is a perfection, becomes a defect; the organs of touch may be so refined as to show a diseased sensibility; the ear may become so exquisitely sensitive as to be more susceptible to the uneasiness produced by discords than to the pleasures of harmony. In the nations which have been long civilised, the defects are generally those dependent on excess of sensibility,—defects which are cured in the next generation by the strength and power belonging to a ruder tribe. In looking back upon the vision of ancient history, you will find that there never has been an instance of a migration to any extent of any race but the Caucasian, and they have usually passed from the North to the South. The negro race has always been driven before these conquerors of the world; and the red men, the aborigines of America, are constantly diminishing in number, and it is probable that in a few centuries more their pure blood will be entirely extinct. In the peopling of the world, the great object is evidently to produce organised frames most capable of the happy and intellectual enjoyment of life,—to raise man above the mere animal state. To perpetuate the advantages of civilisation, the races most capable of these advantages are preserved and extended, and no considerable improvement made by an individual is ever lost to society. You see living forms perpetuated in the series of ages, and apparently the quantity of life increased. In comparing the population of the globe as it now is with what it was centuries ago, you will find it considerably greater; and if the quantity of life is increased, the quantity of happiness, particularly that resulting from the exercise of intellectual power, is increased in a still higher ratio. Now, you will say, *is mind generated, is spiritual power created;* or, are those results dependent upon the organisation of matter, upon new perfections given to the machinery upon which thought and motion depend? I proclaim to you," said the Genius, raising his voice from its low and sweet tone to one of ineffable majesty, "neither of these opinions are true. Listen, whilst I reveal to you the mysteries of spiritual natures, but I almost fear that with the mortal veil of your senses surrounding you, these mysteries can never be made perfectly intelligible to your mind. Spiritual natures are eternal and indivisible, but their modes of being are as infinitely varied as the forms of matter. They have no relation to space, and, in their transitions, no dependence upon time, so that they can pass from one part of the universe to another by laws entirely independent of their motion. The quantity, or the number of spiritual essences, like the quantity or number of the atoms of the material world, are always the same; but their arrangements, like those of the materials which they are destined to guide or govern are infinitely diversified; they are, in fact, parts more or less inferior of the infinite Mind, and in the planetary systems,—to one of which this globe you inhabit belongs,—are in a state of probation, continually aiming at, and generally rising to, a higher state of existence. Were it permitted me to extend your vision to the fates of individual existences, I could show you the same spirit, which, in the form of Socrates, developed the foundations of moral and social virtue, in the Czar Peter possessed of supreme power and enjoying exalted felicity in improving a rude people. I could show you the monad or spirit, which, with the organs of Newton, displayed an intelligence almost above humanity, now in a higher and better state of planetary existence drinking intellectual light from a purer source and approaching nearer to the infinite and divine Mind. But prepare your mind and you shall at least catch a glimpse of those states, which the highest intellectual beings that have belonged to the earth enjoy after death, in their transition to new and more exalted natures." The voice ceased, and I appeared in a dark, deep and cold cave, of which the walls of the Colosseum formed the boundary. From above, a bright and rosy light broke into this cave, so that whilst below all was dark, above all was bright and illuminated with glory. I seemed possessed at this moment of a new sense and felt that the light brought with it a genial warmth; odours like those of the most balmy flowers appeared to fill the air, and the sweetest sounds of music absorbed my sense of hearing; my limbs had a new lightness given to them, so that I seemed to rise from the earth, and to mount gradually into the bright luminous air, leaving behind me the dark and cold cavern and the ruins with which it was strewed. Language is inadequate to describe what I felt in rising continually upwards through this bright and luminous atmosphere. I had not, as is generally the case with persons in dreams of this kind, imagined to myself wings, but I rose gently and securely as if I were myself a part of the ascending column of light. By degrees this luminous atmosphere, which was diffused over the whole of space, became more circumscribed, and extended only to a limited spot around me. I saw through it the bright blue sky, the moon and stars, and I passed by them as if it were in my power to touch them with my hand; I beheld Jupiter and Saturn as they appear through our best telescopes, but still more magnified, all the moons and belts of Jupiter being perfectly distinct, and the double ring of Saturn appearing in that state in which I have heard Herschel often express a wish he could see it. It seemed as if I were on the verge of the solar system, and my moving sphere of light now appeared to pause. I again heard the low and sweet voice of the Genius, which said, "You are now on the verge of your own system: will you go further, or return to the earth?" I replied, "I have left an abode which is damp, dreary, dark and cold; I am now in a place where all is life, light, and enjoyment; show me at least, before I return, the glimpse which you promised me of those superior intellectual natures and the modes of their being and their enjoyments." "There are creatures far superior," said the Genius, "to any idea your imagination can form in that part of the system now before you, comprehending Saturn, his moons and rings. I will carry you to the verge of the immense atmosphere of this planet; in that space you will see sufficient to wonder at, and far more than with your present organisation, it would be possible for me to make you understand." I was again in motion and again almost as suddenly at rest. I saw below me a surface infinitely diversified, something like that of an immense glacier covered with large columnar masses, which appeared as if formed of glass, and from which were suspended rounded forms of various sizes, which, if they had not been transparent, I might have supposed to be fruit. From what appeared to me to be analogous to masses of bright blue ice, streams of the richest tint of rose-colour or purple burst forth and flowed into basins, forming lakes or seas of the same colour. Looking through the atmosphere towards the heavens I saw brilliant opaque clouds of an azure colour that reflected the light of the sun, which had to my eyes an entirely new aspect, and appeared smaller, as if seen through a dense blue mist. I saw moving on the surface below me immense masses, the forms of which I find it impossible to describe; they had systems for locomotion similar to those of the morse, or sea-horse; but I saw with great surprise that they moved from place to place by six extremely thin membranes, which they used as wings. Their colours were varied and beautiful, but principally azure and rose-colour; I saw numerous convolutions of tubes, more analogous to the trunk of the elephant than to anything else I can imagine, occupying what I supposed to be the upper parts of the body, and my feeling of astonishment almost became one of disgust, from the peculiar character of the organs of these singular beings; and it was with a species of terror that I observed one of them mounting upwards apparently flying towards those opaque clouds which I have before mentioned. "I know what your feelings are," said the Genius: "you want analogies and all the elements of knowledge to comprehend the scene before you. You are in the same state in which a fly would be whose microscopic eye was changed for one similar to that of man; and you are wholly unable to associate what you now see with your former knowledge. But, those beings who are before you, and who appear to you almost as imperfect in their functions as the zoophytes of the polar sea, to which they are not unlike in their apparent organisation to your eyes, have a sphere of sensibility and intellectual enjoyment far superior to that of the inhabitants of your earth. Each of those tubes which appears like the trunk of an elephant, is an organ of peculiar motion or sensation. They have many modes of perception of which you are wholly ignorant, at the same time that their sphere of vision is infinitely more extended than yours, and their organs of touch far more perfect and exquisite. It would be useless for me to attempt to explain their organisation, which you could never understand; but of their intellectual objects of pursuit I may perhaps give you some notion. They have used, modified and applied the material world in a manner analogous to Man; but with far superior powers they have gained superior results. Their atmosphere being much denser than yours and the specific gravity of their planet less, they have been enabled to determine the laws belonging to the solar system with far more accuracy than you can possibly conceive, and any one of these beings could show you what is now the situation and appearance of your moon with a precision that would induce you to believe that he saw it, though his knowledge is merely the result of calculation. Their sources of pleasure are of the highest intellectual nature. With the magnificent spectacle of their own rings and moons revolving round them,—with the various combinations required to understand and predict the relations of these wonderful phenomena, their minds are in unceasing activity, and this activity is a perpetual source of enjoyment. Your view of the solar system is bounded by Uranus, and the laws of this planet form the ultimatum of your mathematical results; but these beings catch a sight of planets belonging to another system, and even reason on the phenomena presented by other suns. Those comets, of which your astronomical history is so imperfect, are to them perfectly familiar, and in their ephemerides their places are shown with as much accurateness as those of Jupiter or Venus in your almanacks. The parallax of the fixed stars nearest them is as well understood as that of their own sun; and they possess a magnificent history of the changes taking place in the heavens,—changes which are governed by laws that it would be vain for me to attempt to give you an idea of. They are acquainted with the revolutions and uses of comets; they understand the system of those meteoric formations of stones which have so much astonished you on earth; and they have histories in which the gradual changes of nebulæ in their progress towards systems have been registered, so that they can predict their future changes. And their astronomical records are not like yours which go back only twenty centuries to the time of Hipparchus; they embrace a period a hundred times as long, and their civil history for the same time is as correct as their astronomical one. As I cannot describe to you the organs of these wonderful beings, so neither can I show to you their modes of life; but as their highest pleasures depend upon intellectual pursuits, so you may conclude that those modes of life bear the strictest analogy to that which on the earth you would call exalted virtue. I will tell you however that they have no wars, and that the objects of their ambition are entirely those of intellectual greatness, and that the only passions they feel in which comparisons with each other can be instituted are those dependent upon a love of glory of the purest kind. If I were to show you the different parts of the surface of this planet, you would see marvellous results of the powers possessed by these highly intellectual beings, and of the wonderful manner in which they have applied and modified matter. Those columnar masses, which seem to you as if arising out of a mass of ice below, are results of art, and processes are going on in them connected with the formation and perfection of their food. The brilliant coloured fluids are the results of such operations as on the earth would be performed in your laboratories, or more properly in your refined culinary apparatus, for they are connected with their system of nourishment. Those opaque azure clouds, to which you saw a few minutes ago one of those beings directing his course, are works of art and places in which they move through different regions of their atmosphere and command the temperature and the quantity of light most fitted for their philosophical researches, or most convenient for the purposes of life. On the verge of the visible horizon which we perceive around us, you may see in the east a very dark spot or shadow, in which the light of the sun seems entirely absorbed; this is the border of an immense mass of liquid analogous to your ocean, but unlike your sea it is inhabited by a race of intellectual beings inferior indeed to those belonging to the atmosphere of Saturn, but yet possessed of an extensive range of sensations and endowed with extraordinary power and intelligence. I could transport you to the different planets and show you in each, peculiar intellectual beings bearing analogies to each other, but yet all different in power and essence. In Jupiter you would see creatures similar to those in Saturn, but with different powers of locomotion. In Mars and Venus you would find races of created forms more analogous to those belonging to the earth. But in every part of the planetary system you would find one character peculiar to all intelligent natures, a sense of receiving impressions from light by various organs of vision; and towards this result you cannot but perceive that all the arrangements and motions of the planetary bodies, their satellites and atmospheres, are subservient. The spiritual natures therefore that pass from system to system, in progression towards power and knowledge, preserve at least this one invariable character, and their intellectual life may be said to depend more or less upon the influence of light. As far as my knowledge extends, even in other parts of the universe the more perfect organised systems still possess this source of sensation and enjoyment; but with higher natures, finer and more ethereal kinds of matter are employed in organisation, substances that bear the same analogy to common matter that the refined or most subtle gases do to common solids and fluids. The universe is everywhere full of life, but the modes of this life are infinitely diversified, and yet every form of it must be enjoyed and known by every spiritual nature before the consummation of all things. You have seen the comet moving with its immense train of light through the sky; this likewise has a system supplied with living beings and their existence derives its enjoyment from the diversity of circumstances to which they are exposed; passing as it were through the infinity of space they are continually gratified by the sight of new systems and worlds, and you can imagine the unbounded nature of the circle of their knowledge. My power extends so far as to afford you a glimpse of the nature of a cometary world." I was again in rapid motion, again passing with the utmost velocity through the bright blue sky, and I saw Jupiter and his satellites and Saturn and his ring behind me, and before me the sun, no longer appearing as through a blue mist but in bright and unsupportable splendour, towards which I seemed moving with the utmost velocity. In a limited sphere of vision, in a kind of red hazy light similar to that which first broke in upon me in the Colosseum, I saw moving round me globes which appeared composed of different kinds of flame and of different colours. In some of these globes I recognised figures which put me in mind of the human countenance, but the resemblance was so awful and unnatural that I endeavoured to withdraw my view from them. "You are now," said the Genius, "in a cometary system; those globes of light surrounding you, are material forms, such as in one of your systems of religious faith have been attributed to seraphs; they live in that element which to you would be destruction; they communicate by powers which would convert your organised frame into ashes; they are now in the height of their enjoyment, being about to enter into the blaze of the solar atmosphere. These beings so grand, so glorious, with functions to you incomprehensible, once belonged to the earth; their spiritual natures have risen through different stages of planetary life, leaving their dust behind them, carrying with them only their intellectual power. You ask me if they have any knowledge or reminiscence of their transitions; tell me of your own recollections in the womb of your mother and I will answer you. It is the law of divine wisdom that no spirit carries with it into another state and being any habit or mental qualities except those which may be connected with its new wants or enjoyments; and knowledge relating to the earth would be no more useful to these glorified beings than their earthly system of organised dust, which would be instantly resolved into its ultimate atoms at such a temperature; even on the earth the butterfly does not transport with it into the air the organs or the appetites of the crawling worm from which it sprung. There is however one sentiment or passion which the monad or spiritual essence carries with it into all its stages of being, and which in these happy and elevated creatures is continually exalted, the love of knowledge or of intellectual power, which is in fact in its ultimate and most perfect development the love of infinite wisdom and unbounded power, or the love of God. Even in the imperfect life that belongs to the earth this passion exists in a considerable degree, increases even with age, outlives the perfection of the corporeal faculties, and at the moment of death is felt by the conscious being; and its future destinies depend upon the manner in which it has been exercised and exalted. When it has been misapplied and assumes the form of vague curiosity, restless ambition, vain-glory, pride or oppression, the being is degraded, it sinks in the scale of existence and still belongs to the earth or an inferior system, till its errors are corrected by painful discipline. When, on the contrary, the love of intellectual power has been exercised on its noblest objects, in discovering and in contemplating the properties of created forms and in applying them to useful and benevolent purposes, in developing and admiring the laws of the eternal Intelligence, the destinies of the sentient principle are of a nobler kind, it rises to a higher planetary world. From the height to which you have been lifted I could carry you downwards and show you intellectual natures even inferior to those belonging to the earth, in your own moon and in the lower planets, and I could demonstrate to you the effects of pain or moral evil in assisting in the great plan of the exaltation of spiritual natures; but I will not destroy the brightness of your present idea of the scheme of the universe by degrading pictures of the effects of bad passions and of the manner in which evil is corrected and destroyed. Your vision must end with the glorious view of the inhabitants of the cometary worlds: I cannot show you the beings of the system to which I myself belong, that of the sun;

your organs would perish before our brightness, and I am only permitted to be present to you as a sound or intellectual voice. *We* are likewise in progression, but we see and know something of the plans of infinite Wisdom; we feel the personal presence of that supreme Deity which you only imagine; to you belongs faith, to us knowledge; and our greatest delight results from the conviction that we are lights kindled by his light and that we belong to his substance. To obey, to love, to wonder and adore form our relations to the infinite Intelligence. We feel his laws are those of eternal justice, and that they govern all things from the most glorious intellectual natures belonging to the sun and fixed stars to the meanest spark of life animating an atom crawling in the dust of your earth. We know all things begin from and end in his everlasting essence, the cause of causes, the power of powers."

The low and sweet voice ceased; it appeared as if I had fallen suddenly upon the earth, but there was a bright light before me and I heard my name loudly called; the voice was not of my intellectual guide,—the genius before me was my servant bearing a flambeau in his hand. He told me he had been searching me in vain amongst the ruins, that the carriage had been waiting for me above an hour, and that he had left a large party of my friends assembled in the Palazzo F——.

Vesuvius

## DIALOGUE THE SECOND.

### DISCUSSIONS CONNECTED WITH THE VISION IN THE COLOSSEUM.

The same friends Ambrosio, and Onuphrio, who were my companions at Rome in the winter, accompanied me in the spring to Naples. Many conversations occurred in the course of our journey which were often to me peculiarly instructive, and from the difference of their opinions generally animated and often entertaining. I shall detail one of these conversations, which took place in the evening on the summit of Vesuvius, and the remembrance of which, from its connexion with my vision at the Colosseum, has always a peculiar interest for me. We had reached with some labour the edge of the crater and were admiring the wonderful scene around us:—I shall give the conversation in the words of the persons of the drama.

*PHILALETHES.*—It is difficult to say whether there is more of sublimity or beauty in the scene around us. Nature appears at once smiling and frowning, in activity and repose. How tremendous is the volcano, how magnificent this great laboratory of Nature in its unceasing fire, its subterraneous lightnings and thunder, its volumes of smoke, its showers of stones and its rivers of ignited lava! How contrasted the darkness of the scoriæ, the ruins and the desolation round the crater with the scene below! There we see the rich field covered with flax or maize or millet, and intersected by rows of trees which support the green and graceful festoons of the vine; the orange and lemon tree covered with golden fruit appear in the sheltered glens; the olive-trees cover the lower hills; islands, purple in the beams of the setting sun, are scattered over the sea in the west, and the sky is tinted with red softening into the brightest and purest azure; the distant mountains still retain a part of the snows of winter, but they are rapidly melting, and they absolutely seem to melt reflecting the beams of the setting sun, glowing as if on fire. And Man appears emulous of Nature, for the city below is full of activity; the nearest part of the bay is covered with boats, busy multitudes crowd the strand, and at the same time may be seen a number of the arts belonging to civilised society in operation, house-building, ship-building, rope-making, the manipulations of the smith and of the agriculturist: and not only the useful arts, but even the amusements and luxuries of a great metropolis may be witnessed from the spot in which we stand; that motley crowd is collected round a policinello, and those smaller groups that surround the stalls are employed in enjoying the favourite food and drink of the lazzaroni.

*AMBROSIO.*—We see not only the power and activity of man as existing at present, and of which the highest example may be represented by the steam-boat which is now departing for Palermo, but we may likewise view scenes which carry us into the very bosom of antiquity and as it were make us live with the generations of past ages. Those small square buildings scarcely visible in the distance are the tombs of distinguished men amongst the early Greek colonists of the country; and those rows of houses without roofs, which appear as if newly erecting, constitute a Roman town restored from its ashes, that remained for centuries as if it had been swept from the face of the earth. When you study it in detail, you will hardly avoid the illusion that it is a rising city; you will almost be tempted to ask where are the workmen, so perfect are the walls of the houses, so bright and uninjured the painting upon them. Hardly anything is wanting to make this scene a magnificent epitome of all that is most worthy of admiration in Nature and Art; had there been in addition to the other objects a fine river and a waterfall, the epitome would I think have been absolutely perfect.

*PHIL.*—You are most unreasonable in imagining additions to a scene which it is impossible to embrace in one view, and which presents so many objects to the senses, the memory, and the imagination; yet there is a river in the valley between Naples and Castel del Mare; you may see its silver thread and the white foam of its torrents in the distance; and if you were geologists you would find a number of sources of interest which have not been mentioned in the scenery surrounding us. Somma which is before us, for instance, affords a wonderful example of a mountain formed of marine deposits, and which has been raised by subterraneous fire, and those large and singular veins which you see at the base and rising through the substance of the strata are composed of volcanic porphyry, and offer a most striking and beautiful example of the generation and structure of rocks and mineral formations.

*ONUPHRIO.*—As we passed through Portici on the road to the base of Vesuvius, it appeared to me that I saw a stone which had an ancient Roman inscription upon it, and which occupied the place of a portal in the modern palace of the Barberini.

*PHIL.*—This is not an uncommon circumstance; most of the stones used in the palaces of Portici had been employed more than 2000 years before in structures raised by the ancient Romans or by the Greek colonists; and it is not a little remarkable that the buildings of Herculaneum, a town covered with ashes, tufa and lava from the first recorded eruption of Vesuvius, more than 1700 years ago, should have been constructed of volcanic materials produced by some antecedent igneous action of the mountain in times beyond the reach of history; and it is still more remarkable that men should have gone on for so many ages making erections in spots where their works have been so often destroyed, inattentive to the voice of time or the warnings of Nature.

*ONU.*—This last fact recalls to my recollection an idea which Philalethes started in the remarkable dream, which he would have us believe occurred to him in the Colosseum; namely, that no important facts which can be useful to society are ever lost, and that like these stones, though covered with ashes or hidden amongst ruins, they are sure to be brought forward again and made use of in some new form.

*AMB.*—I do not see the justness of the analogy to which Onuphrio refers; but, there are many parts of that vision on which I should wish to hear the explanations of Philalethes. I consider it in fact as a sort of poetical epitome of his philosophical opinions, and I regard this vision or dream as a mere web of his imagination, in which he intended to catch us his summer-flies and travelling companions.

*PHIL.*—There, Ambrosio, you do me wrong. I will acknowledge, if you please, that the vision in the Colosseum is a fiction; but the most important parts of it really occurred to me in sleep, particularly that in which I seemed to leave the earth and launch into the infinity of space under the guidance of a tutelary genius. And the origin and progress of civil society form likewise parts of another dream which I had many years ago; and it was in the reverie which happened when you quitted me in the Colosseum that I wove all these thoughts together, and gave them the form in which I narrated them to you.

*AMB.*—Of course we may consider them as an accurate representation of your waking thoughts.

*PHIL.*—I do not say that they strictly are so; for I am not quite convinced that dreams are always representations of the state of the mind modified by organic diseases or by associations. There are certainly no absolutely new ideas produced in sleep, yet I have had more than one instance, in the course of my life, of most extraordinary combinations occurring in this state, which have had considerable influence on my feelings, my imagination, and my health.

*ONU.*—Why, Philalethes, you are becoming a visionary, a dreamer of dreams; we shall perhaps set you down by the side of Jacob Behmen or of Emanuel Swedenbourg, and in an earlier age you might have been a prophet and have ranked perhaps with Mahomet. But pray give us one of these instances in which such a marvellous influence was produced on your imagination and your health by a dream, that we may form some judgment of the nature of your second-sight or inspirations, and whether they have any foundation, or whether they are not, as I believe, really unfounded, inventions of the fancy, dreams respecting dreams.

*PHIL.*—I anticipate unbelief, and I expose myself to your ridicule in the statement I am about to make, yet I shall mention nothing but a simple fact. Almost a quarter of a century ago, as you know, I contracted that terrible form of typhus fever known by the name of jail fever, I may say, not from any imprudence of my own, but whilst engaged in putting in execution a plan for ventilating one of the great prisons of the metropolis.

My illness was severe and dangerous; as long as the fever continued my dreams or deliriums were most painful and oppressive; but when the weakness consequent to exhaustion came on, and when the probability of death seemed to my physicians greater than that of life, there was an entire change in all my ideal combinations. I remained in an apparently senseless or lethargic state, but in fact my mind was peculiarly active; there was always before me the form of a beautiful woman with whom I was engaged in the most interesting and intellectual conversation.

*AMB.*—The figure of a lady with whom you were in love.

*PHIL.*—No such thing; I was passionately in love at the time, but the object of my admiration was a lady with black hair, dark eyes and pale complexion; this spirit of my vision on the contrary had brown hair, blue eyes and a bright rosy complexion, and was, as far as I can recollect, unlike any of the amatory forms which in early youth had so often haunted my imagination. Her figure for many days was so distinct in my mind as to form almost a visual image: as I gained strength the visits of my good angel, for so I called it, became less frequent, and when I was restored to health they were altogether discontinued.

*ONU.*—I see nothing very strange in this, a mere reaction of the mind after severe pain, and, to a young man of twenty-five, there are few more pleasurable images than that of a beautiful maiden with blue eyes, blooming cheeks, and long nut-brown hair.

*PHIL.*—But all my feelings and all my conversations with this visionary maiden were of an intellectual and refined nature.

*ONU.*—Yes, I suppose, as long as you were ill.

*PHIL.*—I will not allow you to treat me with ridicule on this point till you have heard the second part of my tale. Ten years after I had recovered from the fever, and when I had almost lost the recollection of the vision, it was recalled to my memory by a very blooming and graceful maiden fourteen or fifteen years old, whom I accidentally met during my travels in Illyria; but I cannot say that the impression made by her upon my mind was very strong. Now comes the extraordinary part of the narrative. Ten years after, twenty years after my first illness, at a time when I was exceedingly weak from a severe and dangerous malady, which for many weeks threatened my life, and when my mind was almost in a desponding state, being in a course of travels ordered by my medical advisers, I again met the person who was the representative of my visionary female; and to her kindness and care I believe I owe what remains to me of existence. My despondency gradually disappeared, and though my health still continued weak, life began to possess charms for me which I had thought were for ever gone; and I could not help identifying the living angel with the vision which appeared as my guardian genius during the illness of my youth.

*ONU.*—I really see nothing at all in this fact, whether the first or the second part of the narrative be considered, beyond the influence of an imagination excited by disease. From youth, even to age, women are our guardian angels, our comforters; and I dare say any other handsome young female, who had been your nurse in your last illness, would have coincided with your remembrance of the vision, even though her eyes had been hazel and her hair flaxen. Nothing can be more loose than the images represented in dreams following a fever, and with the nervous susceptibility produced by your last illness, almost any agreeable form would have become the representative of your imaginary guardian genius. Thus it is, that by the power of the fancy, material forms are clothed in supernatural attributes, and in the same manner imaginary divinities have all the forms of mortality bestowed upon them. The gods of the pagan mythology were in all their characters and attributes exalted human beings; the demon of the coward, and the angelic form that appears in the dreams of some maid smitten by devotion, and who, having lost her earthly lover, fixes her thoughts on heaven, are clothed in the character and vestments of humanity changed by the dreaminess of passion.

*AMB.*—With such a tendency, Philalethes, as you have shown to believe in something like a supernatural or divine influence on the human mind, I am astonished there should be so much scepticism belonging to your vision in the Colosseum. And your view of the early state of man, after his first creation, is not only incompatible with revelation, but likewise with reason and everything that we know respecting the history or traditions of the early nations of antiquity.

*PHIL.*—Be more distinct and detailed in your statements, Ambrosio, that I may be able to reply to them; and whilst we are waiting for the sunrise we may discuss the subject, and for this, let us seat ourselves on these stones where we shall be warmed by the vicinity of the current of lava.

*AMB.*—You consider man, in his early or first created state, a savage like those who now inhabit New Holland or New Zealand, acquiring by the little use that they make of a feeble reason the power of supporting and extending life. Now, I contend, that if man had been so created, he must inevitably have been destroyed by the elements or devoured by savage beasts, so infinitely his superiors in physical force; he must therefore have been formed with various instinctive faculties and propensities, with a perfection of form and use of organs fitting him to become the master of the earth; and, it appears to me, that the account given in Genesis of the first parents of mankind having been placed in a garden fitted with everything necessary to their existence and enjoyment, and ordered to increase and multiply there, is strictly in harmony with reason and accordant with all just metaphysical views of the human mind. Man, as he now exists, can only be raised with great care and difficulty from the infant to the mature state; all his motions are at first automatic and become voluntary by association; he has to learn everything by slow and difficult processes; many months elapse before he is able to stand, and many years before he is able to provide for the common wants of life. Without the mother or the nurse in his infant state, he would die in a few hours; and without the laborious discipline of instruction and example, he would remain idiotic and inferior to most other animals. His reason is only acquired gradually, and when in its highest perfection is often uncertain in its results; he must therefore have been created with instincts that for a long while supplied the want of reason, and which enabled him, from the first moment of his existence, to provide for his wants, to gratify his desires, and enjoy the power and the activity of life.

*PHIL.*—I acknowledge that your objection has some weight, but not so much as you would attribute to it. I will suppose that the first created man or men had certain powers or instincts, such as now belong to the rudest savages of the southern hemisphere; I will suppose them created with the use of their organs for defence and offence, and with passions and propensities enabling them to supply their own wants. And I oppose the fact of races who are now actually in this state to your vague, historical, or traditionary records; and their gradual progress or improvement from this early state of society to that of the highest state of civilisation or refinement may, I think, be easily deduced from the exertions of reason, assisted by the influence of the moral powers and of physical circumstances. Accident, I conceive, must have had some influence in laying the foundations of certain arts; and a climate in which labour was not too oppressive, and in which the exertion of industry was required to provide for the wants of life, must have fixed the character of the activity of the early improving people. Where nature is too kind a mother, man is generally a spoiled child; where she is severe and a stepmother, his powers are usually withered and destroyed. The people of the south and the north, and those between the tropics, offer, even at this day, proof of the truth of this principle; and it is even possible now to find on the surface of the earth, all the different gradations of the states of society, from that in which man is scarcely removed above the brute, to that in which he appears approaching in his nature to a divine intelligence. Besides, reason being the noblest gift of God to man, I can hardly suppose that an infinitely powerful and all-wise Creator would bestow upon the early inhabitants of the globe a greater proportion of instinct than was at first necessary to preserve their existence, and that he would not leave the great progress of their improvement to the development and exaltation of their reasoning powers.

*AMB.*—You appear to me in your argument to have forgotten the influence that any civilised race must possess over savages; and many of the nations which you consider as in their original state, may have descended from nations formerly civilised; and it is quite as easy to trace the retrograde steps of a people as their advances; the savage hordes who now inhabit the northern coast of Africa are probably descended from the opulent, commercial, and ingenious Carthaginians who once contended with Rome for the empire of the world; and even nearer home, we might find in southern Italy and her islands, proofs of a degradation not much inferior. What I contend for is, the civilisation of the first patriarchal races who peopled the East, and who passed into Europe from Armenia, in which paradise is supposed to have been placed. The early civilisation of this race could only have been in consequence of their powers and instincts having been of a higher character than those of savages. They appear to have been small families,—a state not at all fitted for the discovery of arts by the exercise of the mind, and they professed the most sublime form of religion,—the worship of one Supreme Intelligence, a truth which after a thousand years of civilisation was with difficulty attained by the most powerful efforts of reasoning by the Greek sages. It appears to me, that in the history of the Jews, nothing can be more in conformity to our ideas of just analogy, than this series of events.

Our first parents were created with every thing necessary for their wants and their happiness; they had only one duty to perform, by their obedience, to prove their love and devotion to their Creator. In this they failed, and death or the fear of death became a curse upon their race; but the father of mankind repented, and his instinctive or intellectual powers given by revelation were transmitted to his offspring, more or less modified by their reason, which they had gained as the fruit of their disobedience. One branch of this offspring, however, in whom faith shone forth above reason, retained their peculiar powers and institutions and preserved the worship of Jehovah pure, whilst many of the races sprung from their brethren became idolatrous, and the clear light of heaven was lost through the mist of the senses; and that Being, worshipped by the Israelites only as a mysterious word, was forgotten by many of the nations who lived in the neighbouring countries; and, men, beasts, the parts of the visible universe, and even stocks and stones were set up as objects of adoration. The difficulty which the divine legislators of the Jewish people had to preserve the purity of their religion amongst the idolatrous nations by whom they were surrounded, proves the natural evil tendency of the human mind after the fall of man. And, whoever will consider the nature of the Mosaical or ceremonial law, and the manner in which it was suspended before the end of the Roman empire, the expiatory sacrifice of the Messiah, the fear of death destroyed by the blessed hopes of immortality established by the resurrection of Jesus Christ, the destruction of Jerusalem by Titus, and the triumphs of Christianity over Paganism in the time of Constantine, can, I think, hardly fail to acknowledge the reasonableness of the truth of revealed religion as founded upon the early history of man; and whoever acknowledges this reasonableness and this truth, must, I think, be dissatisfied with the view which Philalethes or his Genius has given of the progress of society, and will find in it one instance, amongst many others that might be discovered, of the vague and erring results of his so much boasted human reason.

*ONU.*—I fear I shall shock Ambrosio; but I cannot help vindicating a little the philosophical results of human reason, which, it must be allowed, are entirely hostile to his ideas. I agree with Philalethes, that it is the noblest gift of God to man; and I cannot think that Ambrosio's view of the paradisaical condition, and the fall of man, and the progress of society, is at all in conformity with the ideas we ought to form of the institutions of an infinitely wise and powerful being. Besides, Ambrosio speaks of the reasonableness of his own opinions; of course, his notions of reason must be different from mine, or we have adopted different forms of logic. I do not find in the biblical history any idea of the Supreme Intelligence conformable to those of the Greek philosophers. On the contrary, I find Jehovah everywhere described as a powerful material being, endowed with organs, feelings, and passions similar to those of a great and exalted human agent. He is described as making man in his own image, as walking in the garden in the cool of the evening, as being pleased with sacrificial offerings, as angry with Adam and Eve, as personally cursing Cain for his crime of fratricide, and even as providing our first parents with garments to hide their nakedness. Then, he appears a material form in the midst of flames, thunder, and lightning, and was regarded by the Levites as having a fixed residence in the ark. He is contrasted throughout the whole of the Old Testament, with the gods of the heathens only as being more powerful; and, in the strange scene which took place in Pharaoh's court, he seemed to have measured his abilities with those of certain seers, or magicians, and to have proved his superiority only by producing greater and more tremendous plagues. In all the early history of the Jewish nation, there is no conception approaching to the sublimity of that of Anaxagoras, who called God the Intelligence or *νους*; he appears always, on the contrary, like the genii of Arabian romance, living in clouds, descending on mountains, urging his chosen people to commit the most atrocious crimes, to destroy all the races not professing the same worship, and to exterminate even the child and the unborn infant. Then, I find in the Old Testament no promise of a spiritual Messiah, but only of a temporal king, who, as the Jews believe, is yet to come. The serpent in Genesis has no connexion with the spirit of evil; but is described only as the most subtile beast of the field, and having injured man, there was to be a perpetual enmity between their races; the serpent when able was to bite the heel of the man, and the man, when an opportunity occurred, was to bruise the head of the serpent. I will allow, if you please, that an instinct of religion or superstition belongs to the human mind, and that the different forms which this instinct assumes depend upon various circumstances, and accidents of history and climate; but I am not sure that the religion of the Jews was superior to that of the Sabæans who worshipped the stars, or of the ancient Persians who adored the sun as the visible symbol of divine power, or of the Eastern nations who, in the various forms of the visible universe, worshipped the powers and energies of the Divinity. I feel like the ancient Romans with respect to toleration; I would give a place to all the gods in my Pantheon, but I would not allow the followers of Bramah or of Christ to quarrel about the modes of incarnation, or the superiority of the attributes of their triune God.

*AMB.*—You have mistaken me, Onuphrio, if you think I am shocked by your opinions. I have seen too much of the wanderings of human reason, ever to be surprised by them, and the views you have adopted are not uncommon amongst young men of very superior talents, who have only slightly examined the evidences of revealed religion. But I am glad to find that you have not adopted the code of infidelity of many of the French revolutionists and of an English school of sceptics, who find in the ancient astronomy all the germs of the worship of the Hebrews, who identify the labours of Hercules with those of the Jewish heroes, and who find the life, death, and resurrection of the Messiah in the history of the solar day. You at least allow the existence of a peculiar religious instinct, or, as you are pleased to call it, superstition, belonging to the human mind, and I have hopes that upon this foundation you will ultimately build up a system of faith not unworthy a philosopher and a Christian. Man, with whatever religious instincts he was created, was intended to communicate with the visible universe by sensations and act upon it by his organs, and in the earliest state of society he was more particularly influenced by his gross senses. Allowing the existence of a Supreme Intelligence and his beneficent intentions towards man, the ideas of his presence which he might think fit to impress upon the mind, either for the purpose of veneration or of love, of hope or fear, must have been in harmony with the general train of his sensations: I am not sure that I make myself intelligible. The same infinite power which in an instant could create an universe, could of course so modify the ideas of an intellectual being as to give them that form and character most fitted for his existence; and, I suppose in the early state of created man, he imagined that he enjoyed the actual presence of the Divinity and heard his voice. I take this to be the first and simplest result of religious instinct. In early times amongst the patriarchs I suppose the ideas were so vivid as to be confounded with impressions; but as religious instinct probably became feebler in their posterity, the vividness of the impressions diminished, and they then became visions or dreams, which with the prophets seem to have constituted inspiration. I do not suppose that the Supreme Being ever made himself known to man by a real change in the order of nature, but that the sensations of men were so modified by their instincts as to induce the belief in his presence. That there was a divine Intelligence continually acting upon the race of Seth as his chosen people, is I think clearly proved by the events of their history; and also that the early opinions of a small tribe in Judæa were designed for the foundation of the religion of the most active and civilised and powerful nations of the world, and that after a lapse of three thousand years. The manner in which Christianity spread over the world with a few obscure mechanics or fishermen for its promulgators,—the mode in which it triumphed over paganism even when professed and supported by the power and philosophy of a Julian,—the martyrs who subscribed to the truth of Christianity by shedding their blood for the faith,—the exalted nature of those intellectual men by whom it has been professed, who had examined all the depths of nature, and exercised the profoundest faculties of thought, such as Newton, Locke, and Hartley,—all appear to me strong arguments in favour of revealed religion. I prefer rather founding my creed upon the fitness of its doctrines, than upon historical evidences or the nature of its miracles. The divine Intelligence chooses that men should be convinced according to the ordinary train of their sensations, and on all occasions it appears to me more natural, that a change should take place in the human mind, than in the order of nature. The popular opinion of the people of Judæa was, that certain diseases were occasioned by devils taking possession of a human being; the disease was cured by our Saviour, and this in the Gospel is expressed by his casting out devils. But without entering into explanations respecting the historical miracles belonging to Christianity, it is sufficient to say, that its truth is attested by a constantly existing miracle,—the present state of the Jews, which was predicted by Jesus. Their temple and city were destroyed and all attempts made to rebuild it have been vain, and they remain the despised and outcasts of the world.

*ONU.*—But you have not answered my objections with respect to the cruelties exercised by the Jews under the command of Jehovah, which appear to me in opposition to all our views of divine justice.

*AMB.*—I think even Philalethes will allow that physical and moral diseases are hereditary, and that to destroy a pernicious unbelief or demoniacal worship, it was necessary to destroy the whole race root and branch. As an example, I will imagine a certain contagious disease which is transmitted by parents to children, and which like the plague is communicated to sound persons by contact; to destroy a family of men who would spread this disease over the whole earth, would unquestionably be a mercy. Besides I believe in the immortality of the sentient principle in man; destruction of life is only a change of existence, and supposing the new existence a superior one, it is a gain. To the Supreme Intelligence, the death of a million of human beings, is the mere circumstance of so many spiritual essences changing their habitations, and is analogous to the myriad millions of larvæ that leave their coats and shells behind them, and rise into the atmosphere as flies, in a summer day. When man measures the works of the divine Mind by his own feeble combinations, he must wander in gross error; the infinite can never be understood by the finite.

*ONU.*—As far as I can comprehend your reasoning, the priests of Juggernaut might make the same defence for their idol, and find in such views a fair apology for the destruction of thousands of voluntary victims crushed to pieces by the feet of the sacred elephant.

*AMB.*—Undoubtedly they might, and I should allow the justness of their defence if I saw in their religion any germs of a divine institution fitted to become, like the religion of Jehovah, the faith of the whole civilised world, embracing the most perfect form of theism and the most refined and exalted morality. I consider the early acts of the Jewish nation as the lowest and rudest steps of a temple raised by the Supreme Being to contain the altar of sacrifice to his glory. In the early periods of society, rude and uncultivated men could only be acted upon by gross and temporal rewards and punishments; severe rites and heavy discipline were required to keep the mind in order, and the punishment of the idolatrous nations served as an example for the Jews. When Christianity took the place of Judaism, the ideas of the Supreme Being became more pure and abstracted, and the visible attributes of Jehovah and his angels appear to have been less frequently presented to the mind; yet even for many ages, it seemed as if the grossness of our material senses required some assistance from the eye in fixing or perpetuating the character of religious instinct, and the church to which I belong, and I may say the whole Christian church in early times, allowed visible images, pictures, statues and relics as the means of awakening the stronger devotional feelings. We have been accused of worshipping merely inanimate objects; but this is a very false notion of the nature of our faith; we regard them merely as vivid characters representing spiritual existences, and we no more worship them than the Protestant does his bible when he kisses it under a solemn religious adjuration. The past, the present, and the future, being the same to the infinite and divine Intelligence, and man being created in love for the purposes of happiness, the moral and religious discipline to which he was submitted, was in strict conformity to his progressive faculties, and to the primary laws of his nature. It is but a rude analogy, yet it is the only one I can find, that of comparing the supreme Being to a wise and good father who to secure the well-being of his offspring is obliged to adopt a system of rewards and punishments in which the senses at first and afterwards the imagination and reason are concerned. He terrifies them by the example of others, awakens their love of glory by pointing out the distinction and the happiness gained by superior men by adopting a particular line of conduct; he uses at first the rod and gradually substitutes for it the fear of immediate shame; and having awakened the fear of shame and the love of praise or honour with respect to temporary and immediate actions, he extends them to the conduct of the whole of life, and makes what was a momentary feeling a permanent and immutable principle. And obedience in the child to the will of such a parent, may be compared to faith in and obedience to the will of the Supreme Being; and a wayward and disobedient child who reasons upon and doubts the utility of the discipline of such a father, is much in the same state in which the adult man is, who doubts if there be good in the decrees of Providence and who questions the harmony of the plan of the moral universe.

*ONU.*—Allowing the perfection of your moral scheme of religion and its fitness for the nature of man, I find it impossible to believe the primary doctrines on which this scheme is founded. You make the divine Mind, the creator of infinite worlds, enter into the form of a man born of a virgin; you make the eternal and immortal God, the victim of shameful punishment and suffering death on the cross, recovering his life after three days and carrying his maimed and lacerated body into the heaven of heavens.

*AMB.*—You, like all other sceptics, make your own interpretations of the Scriptures and set up a standard for divine power in human reason. The infinite and eternal Mind, as I said before, fits the doctrines of religion to the minds by which they are to be embraced. I see no improbability in the idea that an integrant part of his essence may have animated a human form. There can be no doubt that this belief has existed in the human mind, and the belief constitutes the vital part of the religion. We know nothing of the generation of the human being in the ordinary course of nature; how absurd then to attempt to reason upon the acts of the divine Mind! nor is there more difficulty in imagining the event of a divine conception than of a divine creation. To God the Infinite, little and great, as measured by human powers, are equal; a creature of this earth, however humble and insignificant, may have the same weight with millions of superior beings inhabiting higher systems. But I consider all the miraculous parts of our religion as effected by changes in the sensations or ideas of the human mind, and not by physical changes in the order of nature. A man who has to repair a piece of machinery, as a clock, must take it to pieces and in fact remake it, but to infinite wisdom and power a change in the intellectual state of the human being may be the result of a momentary will, and the mere act of faith may produce the change. How great the powers of imagination are, even in ordinary life, is shown by many striking facts, and nothing seems impossible to this imagination when acted upon by divine influence. To attempt to answer all the objections which may be derived from the want of conformity in the doctrines of Christianity to the usual order of events would be an interminable labour. My first principle is, that religion has nothing to do with the common order of events; it is a pure and divine instinct intended to give results to man which he cannot obtain by the common use of his reason and which at first view often appear contradictory to it, but which when examined by the most refined tests, and considered in the most extensive and profound relations, are in fact in conformity with the most exalted intellectual knowledge, so that indeed the results of pure reason ultimately become the same with those of faith,—the tree of knowledge is grafted upon the tree of life, and that fruit which brought the fear of death into the world budding on an immortal stock becomes the fruit of the promise of immortality.

*ONU.*—You derive Christianity from Judaism. I cannot see their connexion, and it appears to me that the religion of Mahomet is more naturally a scion from the stock of Moses. Christ was a Jew and was circumcised; this rite was continued by Mahomet and is to this day adopted by his disciples though rejected by the Christians. And the doctrines of Mahomet appear to me to have a higher claim to divine origin than those of Jesus; his morality is as pure, his theism purer, and his system of rewards and punishments after death as much in conformity with our ideas of eternal justice.

*AMB.*—I will willingly make the decision of the general question dependent upon the decision of this particular one. No attempts have been made by the Mahometans to find any predictions respecting their founder in the Old Testament, and they have never pretended even that he was the Messiah; therefore as far as prophecy is concerned there is no ground for admitting the truth of the religion of Mahomet. It has been the fashion with a particular sect of infidels to praise the morality of the Mahometans; but I think unjustly. They are said to be honest in their dealings and charitable to those of their own persuasion; but they allow polygamy and a plurality of women, and are despisers and persecutors of the nations professing a different faith. And what a contrast does this morality present to that of the Gospel which inculcates charity to all mankind, and orders benevolent actions to be performed even to enemies; and the purity and simplicity of the infant is held up by Christ as the model of imitation for his followers. Then, in the rewards and punishments of the future state of the Mahometans, how gross are all the ideas, how unlike the promises of a divine and spiritual being; their paradise is a mere earthly garden of sensual pleasure and their Houris represent the ladies of their own harems rather than glorified angelic natures. How different is the Christian heaven, how sublime in its idea, indefinite, yet well suited to a being of intellectual and progressive faculties; "Eye hath not seen, nor ear heard, nor hath it entered into the heart of man to conceive the joys that He hath prepared for those who love Him."

*ONU.*—I confess your answer to my last argument is a triumphant one; but I cannot allow a question of such extent and of such a variety of bearings to be decided by so slight an advantage as that which you have gained by this answer. I will now offer another difficulty to you. The law of the Jews, you will allow, was established by God himself and delivered to Moses from the seat of his glory amongst storms, thunder and lightnings on Mount Sinai. Why should this law, if pure and divine, have been overturned by the same being who established it? And all the ceremonies of the Hebrews have been abolished by the first Christians.

*AMB.*—I deny that the divine law of Moses was abolished by Christ, who himself says "I came to confirm the law, not to destroy it." And, the Ten Commandments form the vital parts of the foundation of the creed of the true Christian. It appears that the religion of Christ was the same pure theism with that of the patriarchs; and the rites and ceremonies established by Moses seem to have been only adjuncts to the spiritual religion intended to suit a particular climate and a particular state of the Jewish nation, rather a dress or clothing of the religion than forming a constituent part of it, a system of discipline of life and manners rather than an essential part of doctrine. The rites of circumcision and ablution were necessary to the health and perhaps even to the existence of a people living on the hottest part of the shores of the Mediterranean. And, in the sacrifices made of the first fruits and of the chosen of the flock, we may see a design not merely connected with the religious faith of the people but even with their political economy. To offer their choicest and best property as a proof of their gratitude to the Supreme Being, was a kind of test of devotedness and obedience to the theocracy; and these sacrifices by obliging them to raise more produce and provide more cattle than were essential to their ordinary support, preserved them from the danger of famine, as in case of a dearth it was easy for the priests under the divine permission to apply these offerings to the necessities of the people. All the pure parts of the faith which had descended from Abraham to David were preserved by Jesus Christ; but the ceremonial religion was fitted only for a particular nation and a particular country; Christianity, on the contrary, was to be the religion of the world and of a civilised and improving world. And it appears to me to be an additional proof of its divine nature and origin, that it is exactly in conformity to the principles of the improvement and perfection of the human mind. When given to a particular race fixed in a peculiar climate, its objects were sensible, its discipline was severe, and its rites and ceremonies numerous and imposing, fitted to act upon weak, ignorant and consequently obstinate men. In its gradual development it threw off its local character and its particular forms, and adopted ceremonies more fitted for mankind in general; and in its ultimate views, it preserves only pure, spiritual, and I may say philosophical doctrines, the unity of the divine nature and a future state, embracing a system of rewards and punishments suited to an accountable and immortal being.

*PHIL.*—I have been attentively listening to your discussion. The views which Ambrosio has taken of Christianity certainly throw a light over it perfectly new to me; and, I must say in candour, that I am disposed to adopt his notion of the early state of society rather than that of my Genius. I have always been accustomed to consider religious feeling as instinctive; but Ambrosio's arguments have given me something approaching to a definite faith for an obscure and indefinite notion. I am willing to allow that man was created, not a savage, as he is represented in my vision, but perfect in his faculties and with a variety of instinctive powers and knowledge; that he transmitted these powers and knowledge to his offspring; but that by an improper use of reason in disobedience to the divine will, the instinctive faculties of most of his descendants became deteriorated and at last lost, but that these faculties were preserved in the race of Abraham and David, and the full power again bestowed upon or recovered by Christ. I am ready to allow the importance of religion in cultivating and improving the world; and Ambrosio's view appears to me capable of being referred to a general law of our nature; and revelation may be regarded not as a partial interference but as a constant principle belonging to the mind of man, and the belief in supernatural forms and agency, the results of prophecies and the miracles, as one only of the necessary consequences of it. Man, as a reasoning animal, must always have doubted of his immortality and plan of conduct. In all the results of faith, there is immediate submission to a divine will, which we are sure is good. We may compare the destiny of man in this respect to that of a migratory bird; if a slow flying bird, as a landrail in the Orkneys in autumn, had reason and could use it as to the probability of his finding his way over deserts, across seas, and of securing his food in passing to a warm climate 3000 miles off, he would undoubtedly starve in Europe; under the direction of his instinct he securely arrives there in good condition. I have allowed the force of your objections to that part of my vision relating to the origin of society, but I hope you will admit that the conclusion of it is not inconsistent with the ideas derived from revelation respecting the future state of the human being.

*AMB.*—Revelation has not disclosed to us the nature of this state, but only fixed its certainty. We are sure from geological facts as well as from sacred history that man is a recent animal on the globe, and that this globe has undergone one considerable revolution, since the creation, by water; and we are taught that it is to undergo another, by fire, preparatory to a new and glorified state of existence of man; but this is all we are permitted to know, and as this state is to be entirely different from the present one of misery and probation, any knowledge respecting it would be useless and indeed almost impossible.

*PHIL.*—My Genius has placed the more exalted spiritual natures in cometary worlds, and this last fiery revolution may be produced by the appulse of a comet.

*AMB.*—Human fancy may imagine a thousand ways in which it may be produced; but upon such notions it is absurd to dwell. I will not allow your Genius the slightest approach to inspiration, and I can admit no verisimility in a reverie which is fixed on a foundation you now allow to be so weak.—But see, the twilight is beginning to appear in the orient sky, and there are some dark clouds on the horizon opposite to the crater of Vesuvius, the lower edges of which transmit a bright light showing the sun is already risen in the country beneath them. I would say that they may serve as an image of the hopes of immortality derived from revelation; for we are sure from the light reflected in those clouds that the lands below us are in the brightest sunshine, but we are entirely ignorant of the surface and the scenery; so, by revelation, the light of an imperishable and glorious world is disclosed to us; but it is in eternity, and its objects cannot be seen by mortal eye or imaged by mortal imagination.

*PHIL.*—I am not so well read in the Scriptures as I hope I shall be at no very distant time; but, I believe the pleasures of heaven are mentioned more distinctly than you allow in the sacred writings. I think, I remember that the saints are said to be crowned with palms and amaranths, and that they are described as perpetually hymning and praising God.

*AMB.*—This is evidently only metaphorical; music is the sensual pleasure which approaches nearest to an intellectual one, and probably may represent the delight resulting from the perception of the harmony of things and of truth seen in God. The palm as an evergreen tree and the amaranth a perdurable flower are emblems of immortality. If I am allowed to give a metaphorical allusion to the future state of the blest, I should image it by the orange grove in that sheltered glen, on which the sun is now beginning to shine, and of which the trees are at the same time loaded with sweet golden fruit and balmy silver flowers. Such objects may well pourtray a state in which hope and fruition become one eternal feeling.

*ONU.*—This glorious sunrise seems to have made you both poetical. Though with the darkest and most gloomy mind of the party, I cannot help feeling its influence; I cannot help believing with you, that the night of death will be succeeded by a bright morning; but as in the scene below us the objects are nearly the same as they were last evening, with more of brightness and brilliancy, with a fairer prospect in the east and more mist in the west, so I cannot help believing that our new state of existence must bear an analogy to the present one, and that the order of events will not be entirely different.

*AMB.*—Your view is not an unnatural one; but I am rejoiced to find some symptoms of a change in your opinions.

*ONU.*—I wish with all my heart they were stronger; I begin to feel my reason a weight and my scepticism a very heavy load. Your discussions have made me a philo-christian, but I cannot understand nor embrace all the views you have developed, though I really wish to do so.

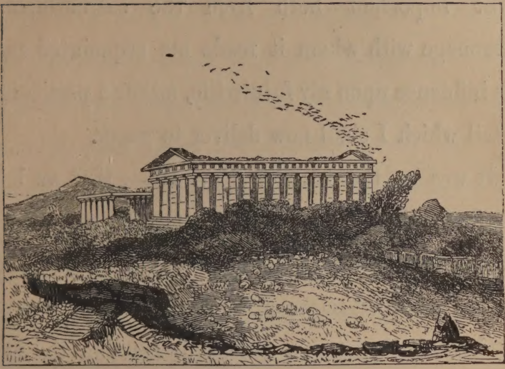
*AMB.*—Your wish, if sincere, I doubt not will be gratified. Fix your powerful mind upon the harmony of the moral world, as you have been long accustomed to do upon the order of the physical universe, and you will see the scheme of the eternal Intelligence developing itself alike in both. Think of the goodness and mercy of Omnipotence, and aid your contemplation by devotional feelings and mental prayer and aspirations to the source of all knowledge, and wait with humility for the light which I doubt not will be so produced in your mind.

*ONU.*—You again perplex me: I cannot believe that the adorations or offerings of so feeble a creature can influence the decrees of Omnipotence.

*AMB.*—You mistake me: as to their influencing or affecting the supreme Mind, it is out of the question; but they affect your own mind, they perpetuate a habit of gratitude and of obedience which may gradually end in perfect faith; they discipline the affections and keep the heart in a state of preparation to receive and preserve all good and pious feelings. Whoever passes from utter darkness into bright sunshine, finds that he cannot at first distinguish objects better in one than in the other; but in a feeble light he acquires gradually the power of bearing a brighter one, and gains at last the habit not only of supporting it, but of receiving delight as well as instruction from it. In the pious contemplations that I recommend to you, there is the twilight or sober dawn of faith which will ultimately enable you to support the brightness of its meridian sun.

*ONU.*—I understand you; but your metaphor is more poetical than just; *your* discipline, however, I have no doubt, is better fitted to enable me to bear the light, than to contemplate it through the smoked or coloured glasses of scepticism.

*AMB.*—Yes; for they not only diminish its brightness, but alter its nature.



Pæstum.

# DIALOGUE THE THIRD.

## THE UNKNOWN.

THE same persons accompanied me in many journeys by land and water to different parts of the Phlegræan fields, and we enjoyed in a most delightful season, the beginning of May, the beauties of the glorious country which encloses the Bay of Naples, so rich, so ornamented with the gifts of nature, so interesting from the monuments it contains and the recollections it awakens. One excursion, the last we made in southern Italy, the most important both from the extraordinary personage with whom it made me acquainted and his influence upon my future life, merits a particular detail which I shall now deliver to paper.

It was on the 16th of May, 18—, that we left Naples at three in the morning, for the purpose of visiting the remains of the temples of Pæstum; and having provided relays of horses we found ourselves at about half-past one o'clock descending the hill of Eboli towards the plain which contains these stupendous monuments of antiquity. Were my existence to be prolonged through ten centuries, I think I could never forget the pleasure I received on that delicious spot. We alighted from our carriage to take some refreshment, and we reposed upon the herbage under the shade of a magnificent pine, contemplating the view around and below us. On the right were the green hills covered with trees, stretching towards Salerno. Beyond them were the marble cliffs which form the southern extremity of the Bay of Sorento. Immediately below our feet was a rich and cultivated country, filled with vineyards and abounding in villas; in the gardens of which were seen the olive and the cypress tree connected as if to memorialise how near to each other are life and death—joy and sorrow. The distant mountains, stretching beyond the plain of Pæstum, were in the full luxuriance of vernal vegetation. And in the extreme distance, as if in the midst of a desert, we saw the white temples glittering in the sunshine. The blue Tyrrhene sea filled up the outline of this scene, which, though so beautiful, was not calm; there was a heavy breeze which blew full from the south-west; it was literally a zephyr, and its freshness and strength in the middle of the day were peculiarly balmy and delightful; it seemed a breath stolen by the spring from the summer. I never saw a deeper brighter azure than that of the waves which rolled towards the shore, and which was rendered more striking by the pure whiteness of their foam. The agitation of nature seemed to be one of breathing and awakening life; the noise made by the waving of the branches of the pine above our heads and by the rattling of its cones was overpowered by the music of a multitude of birds which sung everywhere in the trees that surrounded us, and the cooing of the turtle-doves was heard even more distinctly than the murmuring of the waves or the whistling of the winds, so that in the strife of nature the voice of love was predominant. With our hearts touched by this extraordinary scene we descended to the ruins, and having taken at a farm-house a person who acted as guide or cicerone, we began to examine those wonderful remains which have outlived even the name of the people by whom they were raised, and which continue almost perfect whilst a Roman and a Saracen city since raised have been destroyed. We had been walking for half an hour round the temples in the sunshine when our guide represented to us the danger that there was of suffering from the effects of malaria, for which, as is well known, this place is notorious, and advised us to retire into the interior of the temple of Neptune. We followed his advice and my companions began to employ themselves in measuring the circumference of one of the Doric columns, when they suddenly called my attention to a stranger who was sitting on a camp-stool behind it. The appearance of any person in this place at this time was sufficiently remarkable, but the man who was before us from his dress and appearance would have been remarkable anywhere. He was employed in writing in a memorandum book when we first saw him, but he immediately rose and saluted us by bending the head slightly though gracefully; and this enabled me to see distinctly his person and dress. He was rather above the middle stature, slender, but with well-turned limbs. His countenance was remarkably intelligent, his eye hazel but full and strong. His front was smooth and unwrinkled, and but for some grey hairs, which appeared silvering his brown and curly locks, he might have been supposed to have hardly reached the middle age. His nose was aquiline, the expression of the lower part of his countenance remarkably sweet, and when he spoke to our guide, which he did with uncommon fluency in the Neapolitan dialect, I thought I had never heard a more agreeable voice, sonorous yet gentle and silver-sounded. His dress was very peculiar, almost like that of an ecclesiastic, but coarse and light; and there was a large soiled white hat on the ground beside him, on which was fastened a pilgrim's cockle shell, and there was suspended round his neck a long antique blue enamelled phial, like those found in the Greek tombs, and it was attached to a rosary of coarse beads. He took up his hat and appeared to be retiring to another part of the building, when I apologised for the interruption we had given to his studies, begged him to resume them, and assured him that our stay in the building would be only momentary, for I saw that there was a cloud over the sun, the brightness of which was the cause of our retiring. I spoke in Italian; he replied in English, observing that he supposed the fear of contracting the malaria fever had induced us to seek the shelter of the shade, —"but it is too early in the season to have much reasonable fear of this insidious enemy; yet," he added, "this bottle which you may have observed here at my breast, I carry about with me, as a supposed preventive of the effects of malaria, and as far as my experience, a very limited one however, has gone, it is effectual." I ventured to ask him what the bottle might contain, as such a benefit ought to be made known to the world. He replied,—"It is a mixture which slowly produces the substance called by chemists chlorine, which is well known to be generally destructive to contagious matters; and a friend of mine who has lived for many years in Italy, and who has made a number of experiments with it, by exposing himself to the danger of fever in the worst seasons and in the worst places, believes that it is a secure preventive. I am not convinced of this; but it can do no harm; and in waiting for more evidence of its utility, I employ it without putting the least confidence in its power; nor do I expose myself to the same danger as my friend has done, for the sake of an experiment." I said,—"I believe several scientific persons, Brocchi amongst others, have doubted the existence of any specific matter in the atmosphere, producing intermittent fevers, in marshy countries and hot climates; and have been more disposed to attribute the disease to physical causes, dependent upon the great differences of temperature between day and night, and to the refrigerating effects of the dense fogs, common in such situations, in the evening and morning; and, on this hypothesis, they have recommended warm woollen clothing and fires at night, as the best preventives against these destructive diseases, so fatal to the peasants who remain in the summer and autumn in the neighbourhood of the maremme of Rome, Tuscany or Naples." The stranger said,—"I am acquainted with the opinions of the gentlemen, and they undoubtedly have weight; but, that a specific matter of contagion has not been detected by chemical means, in the atmosphere of marshes, does not prove its non-existence. We know so little of those agents that affect the human constitution, that it is of no use to reason on this subject. There can be no doubt that the line of malaria above the Pontine marshes is marked by a dense fog morning and evening, and most of the old Roman towns were placed upon eminences out of the reach of this fog. I have myself experienced a peculiar effect upon the organs of smell in the neighbourhood of marshes in the evening after a very hot day; and the instances in which people have been seized with intermittents, by a single exposure, in a place infested by malaria in the season of fevers, gives, I think, a strong support to something like a poisonous material existing in the atmosphere in such spots; but I merely offer doubts. I hope the progress of physiology and of chemistry will at no very distant time solve this important problem."

Ambrosio now came forward, and bowing to the stranger said, he took the liberty, as he saw from his familiarity with the cicerone that he was well acquainted with Pæstum, of asking him whether the masses of travertine, of which the Cyclopian walls and the temples were formed, were really produced by aqueous deposition from the river Silaro, as he had often heard reported. The stranger replied,—"that they were certainly produced by deposition from water; and such deposits are made by the Silaro. But I rather believe," he said, "that a lake in the immediate neighbourhood of the city furnished the quarry from which these stones were excavated; and, in half an hour, if you like, after you have finished your examinations of the temples with your guide, I will accompany you to the spot from which it is evident that large masses of the travertine, marmor tiburtinum, or calcareous tufa, have been raised." We thanked him for his attention, accepted his invitation, took the usual walk round the temple, and returned to our new acquaintance, who led the way through the gate of the city to the banks of a pool or lake a short distance off. We walked to the borders on a mass of calcareous tufa, and we saw that this substance had even encrusted the reeds on the shore. There was something peculiarly melancholy in the character of this water. All the herbs around it were grey, as if encrusted with marble. A few buffaloes were slaking their thirst in it, which ran wildly away on our approach, and appeared to retire into a rocky excavation or quarry at the end of the lake: there were a number of birds, which, on examination, I found were sea swallows flitting on the surface and busily employed with the libellulæ or dragon-fly, in destroying the myriads of gnats which rose from the bottom and were beginning to be very troublesome to us by their bites. "There," said the stranger, "is what I believe to be the source of those large and durable stones which you see in the plain before you. This water rapidly deposits calcareous matter; and even if you throw a stick into it, a few hours is sufficient to give it a coating of this substance. Whichever way you turn your eyes you see masses of this recently produced marble, the consequence of the overflowing of the lake during the winter floods; and in that large excavation, where you saw the buffaloes disappear, you may observe that immense masses have been removed, as if by the hand of art and in remote times. The marble that remains in the quarry is of the same texture and character as that which you see in the ruins of Pæstum, and I think it is scarcely possible to doubt, that the builders of those extraordinary structures derived a part of their materials from this spot." Ambrosio gave his assent to this opinion of the stranger; and I took the liberty of asking him as to the quantity of calcareous matter contained in solution in the lake, saying, that it appeared to me for so rapid and considerable an effect of deposition, there must be an unusual quantity of solid matter dissolved by the water, or some peculiar circumstance of solution. The stranger replied,—"This water is like many, I may say most, of the sources which rise at the foot of the Apennines; it holds carbonic acid in solution which has dissolved a portion of the calcareous matter of the rock through which it has passed;— this carbonic acid is dissipated in the atmosphere, and the marble, slowly thrown down, assumes a crystalline form and produces coherent stones. The lake before us is not particularly rich in the quantity of calcareous matter that it contains; for, as I have found by experience, a pint of it does not afford more than five or six grains; but the quantity of fluid and the length of time are sufficient to account for the immense quantities of tufa and rock which in the course of ages have accumulated in this situation." Onuphrio's curiosity was excited by this statement of the stranger, and he said,—"May I take the liberty of asking, if you have any idea as to the cause of the large quantity of carbonic acid, which you have been so good as to inform us exists in most of the waters in this country?" The stranger replied,—"I certainly have formed an opinion on this subject, which I willingly state to you. It can, I think, be scarcely doubted that there is a source of volcanic fire at no great distance from the surface, in the whole of southern Italy; and, this fire acting upon the calcareous rocks of which the Apennines are composed, must constantly detach from them carbonic acid, which, rising to the sources of the springs deposited from the waters of the atmosphere, must give them their impregnation and enable them to dissolve calcareous matter. I need not dwell upon Etna, Vesuvius, or the Lipari islands to prove that volcanic fires are still in existence. There c be no doubt, that in earlier periods almost t whole of Italy was ravaged by them; even Ro itself, the eternal city, rests upon the craters extinct volcanoes; and, I imagine that the trad tional and fabulous record of the destruction ma by the conflagration of Phaeton, in the chariot the sun, and his falling into the Po, had referenc to a great and tremendous igneous volcanic eruptio which extended over Italy and ceased only nea the Po at the foot of the Alps. Be this as it may the sources of carbonic acid are numerous, no merely in the Neapolitan but likewise in the Roma and Tuscan states. The most magnificent waterfall in Europe, that of the Velino near Terni, is partly fed by a stream containing calcareous matter dissolved by carbonic acid, and it deposits marble, which crystallises, even in the midst of its thundering descent and foam, in the bed in which it falls. The Anio or Teverone, which almost approaches in beauty to the Velino in the number and variety of its falls and cascatelle, is likewise a calcareous water;

and, there is still a more remarkable one, which empties itself into this river below Tivoli, and which you have probably seen in your excursions in the campagna of Rome, called the lacus Albula or the lake of the Solfatara." Ambrosio said,—"We remember it well, we saw it this very spring; we were carried there, to examine some ancient Roman baths, and we were struck by the blue milkiness of the water, by the magnitude of the source, and by the disagreeable smell of sulphuretted hydrogen which every where surrounded the lake." The stranger said,—"When you return to Latium I advise you to pay another visit to a spot, which is interesting from a number of causes, some of which I will take the liberty of mentioning to you. You have seen only one lake, that where the ancient Romans erected their baths; but there is another a few yards above it, surrounded by very high rushes and almost hidden by them from the sight. This lake sends down a considerable stream of tepid water to the larger lake, but this water is less strongly impregnated with carbonic acid; the largest lake is actually a saturated solution of this gas, which escapes from it, in such quantities in some parts of its surface, that it has the appearance of being actually in ebullition. I have found by experiment that the water taken from the most tranquil part of the lake, even after being agitated and exposed to the air, contained in solution more than its own volume of carbonic acid gas with a very small quantity of sulphuretted hydrogen, to the presence of which, I conclude, its ancient use in curing cutaneous disorders may be referred. Its temperature, I ascertained, was in the winter in the warmest parts above 80° of Fahrenheit, and it appears to be pretty constant; for I have found it differ a few degrees only, in the ascending source in January, March, May, and the beginning of June: it is therefore supplied with heat from a subterraneous source, being nearly twenty degrees above the mean temperature of the atmosphere. Kircher has detailed in his *Mundus Subterraneus* various wonders respecting this lake, most of which are unfounded, such as that it is unfathomable, that it has at the bottom the heat of boiling water, and that floating islands rise from the gulf which emits it. It must certainly be very difficult, or even impossible to fathom a source, which rises with so much violence from a subterraneous excavation; and, at a time when chemistry had made small progress, it was easy to mistake the disengagement of carbonic acid for an actual ebullition. The floating islands are real, but neither the Jesuit, nor any of the writers who have since described this lake, had a correct idea of their origin, which is exceedingly curious. The high temperature of this water, and the quantity of carbonic acid that it contains, render it peculiarly fitted to afford a pabulum or nourishment to vegetable life: the banks of travertine are everywhere covered with reeds, lichens, confervæ and various kinds of aquatic vegetables; and, at the same time that the process of vegetable life is going on, the crystallisations of the calcareous matter, which is everywhere deposited in consequence of the escape of carbonic acid, likewise proceed, giving a constant milkiness to what from its tint would otherwise be a blue fluid. So rapid is the vegetation, owing to the decomposition of the carbonic acid, that even in winter, masses of confervæ and lichens, mixed with deposited travertine, are constantly detached by the currents of water from the bank, and float down the stream, which being a considerable river is never without many of these small islands on its surface: they are sometimes only a few inches in size and composed merely of dark-green confervæ or purple or yellow lichens, but, they are sometimes, even of some feet in diameter, and contain seeds and various species of common water-plants, which are usually more or less incrusted with marble. There is, I believe, no place in the world, where there is a more striking example of the opposition or contrast of the laws of animate and inanimate nature, of the forces of inorganic chemical affinity and those of the powers of life. Vegetables, in such a temperature and everywhere surrounded by food, are produced with a wonderful rapidity; but, the crystallisations are formed with equal quickness, and they are no sooner produced than they are destroyed together. Notwithstanding the sulphureous exhalations from the lake, the quantity of vegetable matter generated there and its heat make it the resort of an infinite variety of insect tribes; and, even in the coldest days in winter, numbers of flies may be observed on the vegetables surrounding its banks or on its floating islands, and a quantity of their larvæ may be seen there, sometimes incrusted and entirely destroyed by calcareous matter, which is likewise often the fate of the insects themselves, as well as of various species of shell-fish that are found amongst the vegetables, which grow and are destroyed in the travertine on its banks. Snipes, ducks and various water-birds often visit these lakes, probably attracted by the temperature and the quantity of food in which they abound; but they usually confine themselves to the banks, as the carbonic acid disengaged from the surface would be fatal to them, if they ventured to swim upon it when tranquil. In May 18— I fixed a stick on a mass of travertine covered by the water, and I examined it in the beginning of the April following, for the purpose of determining the nature of the depositions. The water was lower at this time, yet I had some difficulty, by means of a sharp-pointed hammer, in breaking the mass which adhered to the bottom of the stick; it was several inches in thickness. The upper part was a mixture of light tufa and the leaves of conferværæ; below this, was a darker and more solid travertine containing black and decomposed masses of conferværæ; in the inferior part, the travertine was more solid and of a grey colour, but with cavities which I have no doubt were produced by the decomposition of vegetable matter. I have passed many hours, I may say, many days, in studying the phenomena of this wonderful lake; it has brought many trains of thought into my mind connected with the early changes of our globe, and I have sometimes reasoned from the forms of plants and animals preserved in marble in this warm source, to the grander depositions in the secondary rocks, where the zoophytes or coral insects have worked upon a grand scale, and where palms and vegetables now unknown, are preserved with the remains of crocodiles, turtles, and gigantic extinct animals of the sauri genus, and which appear to have belonged to a period when the whole globe possessed a much higher temperature. I have likewise often been led from the remarkable phenomena surrounding me in that spot, to compare the works of man with those of nature. The baths, erected there nearly twenty centuries ago, present only heaps of ruins, and even the bricks of which they were built, though hardened by fire, are crumbled into dust, whilst the masses of travertine around it, though formed by a variable source from the most perishable materials, have hardened by time, and the most perfect remains of the greatest ruins in the eternal city, such as the triumphal arches and the Colosseum, owe their duration to this source. Then, from all we know, this lake, except in some change in its dimensions, continues nearly in the same state in which it was described 1700 years ago by Pliny, and I have no doubt contains the same kinds of floating islands, the same plants and the same insects. During the fifteen years that I have known it, it has appeared precisely identical in these respects; —and yet, it has the character of an accidental phenomenon depending upon subterraneous fire. How marvellous then are those laws by which even the humblest types of organic existence are preserved though born amidst the sources of their destruction, and by which a species of immortality is given to generations floating, as it were, like evanescent bubbles, on a stream raised from the deepest caverns of the earth, and instantly losing what may be called its spirit in the atmosphere."

These last observations of the stranger recalled to my recollection some phenomena which I had observed many years ago, and of which I could then give no satisfactory explanation. I was shooting in the marshes which surrounded the ruins of Gabia and where there are still remains supposed to be of the Alexandrine aqueduct; I observed a small insulated hill, apparently entirely composed of travertine, and from its summit there were formations of tufa which had evidently been produced by running water; but the whole mass was now perfectly dry and incrusted by vegetables. At first I suspected that this little mountain had been formed by a jet of calcareous water,—a kind of small fountain analogous to the Geiser, which had deposited travertine, and continued to rise through the basin flowing from a higher level; but the irregular form of the eminence did not correspond to this idea, and I remained perplexed with the fact and unable to satisfy myself as to its cause. The views of the stranger appeared to me now to make it probable that the calcareous water had issued from ancient leaks in the aqueduct, and formed a hillock that had encased the bricks of the erection, which, in other parts where not incrusted by travertine, had become entirely decayed, degraded and removed from the soil. I mentioned the circumstance and my suspicion of its nature. The stranger said,—"You are perfectly correct in your idea. I know the spot well, and if you had not mentioned it, I should probably have quoted it as an instance in which the works of art are preserved, as it were, by the accidents of nature. I was so struck by this appearance last year, that I had the travertine partially removed by some workmen, and I found beneath it the canal of the aqueduct in a perfect state, and the bricks of the arches as uninjured as if freshly laid." The stranger had hardly concluded this sentence, when he was interrupted by Onuphrio; who said,—"I have always supposed that in every geological system water is considered as the cause of the destruction or degradation of the surface; but, in all the instances that you have mentioned, it appears rather as a conservative power, not destroying but rather producing." "It is the general vice of philosophical systems," replied the stranger, "that they are usually founded upon a few facts, which they well explain, and are extended by the human fancy to all the phenomena of nature, to many of which they must be contradictory. The human intellectual powers are so feeble that they can with difficulty embrace a single series of phenomena, and they consequently must fail when extended to the whole of nature. Water by its common operation, as poured down from the atmosphere in rain and torrents, tends to level and degrade the surface, and carries the material of the land into the bosom of the ocean. Fire, on the contrary, in volcanic eruptions usually raises mountains, exalts the surface, and creates islands even in the midst of the sea. But these laws are not invariable, as the instances to which we have just referred prove; and parts of the surface of the globe are sometimes destroyed even by fire, of which examples may be seen in the Phlegræan fields; and islands raised by one volcanic eruption have been immerged in the sea by another. There are, in fact, no accidents in nature; what we call accidents are the results of general laws in particular operation, but we cannot deduce these laws from the particular operation, or the general order from the partial result." Ambrosio said to the stranger,—"You appear, sir, to have paid so much attention to physical phenomena, that few things would give us more pleasure than to know your opinion respecting the early changes and physical history of the globe, for I perceive you do not belong to the modern geological schools." The stranger said,—"I have certainly formed opinions, or rather speculations on these subjects, but I fear they are hardly worth communicating; they have sometimes amused me in hours of idleness, but I doubt if they will amuse others." I said,—"The observations which you have already been so kind as to communicate to us, on the formation of the travertine, lead us not only to expect amusement but likewise instruction."

*THE STRANGER.*—On these matters I had facts to communicate; on the geological scheme of the early history of the globe there are only analogies to guide us, which different minds may apply and interpret in different ways; but, I will not trifle with a long preliminary discourse. Astronomical deductions and actual measures by triangulation prove, that the globe is an oblate spheroid flattened at the poles; and, this form we know, by strict mathematical demonstrations, is precisely the one which a fluid body revolving round its axis and become solid at its surface by the slow dissipation of its heat or other causes, would assume. I suppose therefore, that the globe, in the first state in which the imagination can venture to consider it, was a fluid mass with an immense atmosphere revolving in space round the sun, and that, by its cooling, a portion of its atmosphere was condensed in water which occupied a part of the surface. In this state, no forms of life, such as now belong to our system, could have inhabited it; and, I suppose the crystalline rocks, or, as they are called by geologists, the primary rocks, which contain no vestiges of a former order of things, were the results of the first consolidation on its surface. Upon the further cooling, the water which more or less had covered it, contracted; depositions took place, shell fish and coral insects of the first creation began their labours; and islands appeared in the midst of the ocean raised from the deep by the productive energies of millions of zoophytes. These islands became covered with vegetables fitted to bear a high temperature, such as palms and various species of plants similar to those which now exist in the hottest parts of the world. And, the submarine rocks or shores of these new formations of land became covered with aquatic vegetables, on which various species of shell fish and common fishes found their nourishment. The fluids of the globe in cooling deposited a large quantity of the materials they held in solution, and these deposits agglutinating together the sand, the immense masses of coral rocks and some of the remains of the shells and fishes found round the shores of the primitive lands, produced the first order of secondary rocks. As the temperature of the globe became lower, species of the oviparous reptiles were created to inhabit it;—and the turtle, crocodile, and various gigantic animals of the sauri kind seem to have haunted the bays and waters of the primitive lands. But in this state of things there was no order of events similar to the present;

—the crust of the globe was exceedingly slender and the source of fire a small distance from the surface. In consequence of contraction in one part of the mass, cavities were opened, which caused the entrance of water, and immense volcanic explosions took place, raising one part of the surface, depressing another, producing mountains and causing new and extensive depositions from the primitive ocean. Changes of this kind must have been extremely frequent in the early epochs of nature; and the only living forms of which the remains are found in the strata that are the monuments of these changes, are those of plants, fishes, birds, and oviparous reptiles, which seem most fitted to exist in such a war of the elements. When these revolutions became less frequent; and the globe became still more cooled, and the inequalities of its temperature preserved by the mountain chains, more perfect animals became its inhabitants, many of which, such as the mammoth, megalonix, megatherium, and gigantic hyæna, are now extinct. At this period, the temperature of the ocean seems to have been not much higher than it is at present, and the changes produced by occasional eruptions of it have left no consolidated rocks. Yet, one of these eruptions appears to have been of great extent and some duration, and seems to have been the cause of those immense quantities of water-worn stones, gravel and sand, which are usually called diluvian remains; — and, it is probable that this effect was connected with the elevation of a new continent in the southern hemisphere by volcanic fire. When the system of things became so permanent, that the tremendous revolutions depending upon the destruction of the equilibrium between the heating and cooling agencies were no longer to be dreaded, the creation of man took place; and since that period there has been little alteration in the physical circumstances of our globe. Volcanos sometimes occasion the rise of new islands, portions of the old continents are constantly washed by rivers into the sea, but these changes are too insignificant to affect the destinies of man, or the nature of the physical circumstances of things. On the hypothesis that I have adopted, however, it must be remembered that the present surface of the globe is merely a thin crust surrounding a nucleus of fluid ignited matter; and consequently, we can hardly be considered as actually safe from the danger of a catastrophe by fire.

Onuphrio said, "From the view you have taken, I conclude that you consider volcanic eruptions as owing to the central fire; indeed their existence offers, I think, an argument for believing that the interior of the globe is fluid." The stranger answered; "I beg you to consider the views I have been developing as merely hypothetical, one of the many resting places that may be taken by the imagination in considering this subject. There are, however, distinct facts in favour of the idea, that the interior of the globe has a higher temperature than the surface,—such as the heat increasing in mines the deeper we penetrate, and the number of warm sources which rise from great depths, in almost all countries.

The opinion, that volcanos are owing to this general and simple cause, is I think likewise more agreeable to the analogies of things, than to suppose them dependent upon partial chemical changes, such as the action of air and water upon the combustible bases of the earths and alkalies; though it is extremely probable that these substances may exist beneath the surface, and may occasion some results of volcanic fire. And, on this subject, my notion may perhaps be more trusted, as for a long while I thought volcanic eruptions were owing to chemical agencies of the newly discovered metals of the earths and alkalies; and I made many and some dangerous experiments in the hope of confirming this notion, but in vain."

*AMB.*—We are much indebted to you for your geological illustrations; but they remind me a little of some of the ideas of our friend Philalethes in his remarkable vision and with which we may at some time amuse you in return for your geology, should we be honoured with more of your company. You are obliged to have recourse to creations for all the living beings in your philosophical romance. I do not see why you should not suppose creations or arrangements of dead matter by the same laws of infinite wisdom, and why our globe should not rise at once a divine work fitted for all the objects of living and intelligent natures.

The stranger replied, "I have merely attempted a philosophical history founded upon the facts known respecting rocks and strata and the remains they contain. I begin with what may be considered a creation, a fluid globe supplied with an immense atmosphere, and the series of phenomena which I imagine consequent to the creation, I suppose produced by powers impressed upon matter by omnipotence."

Ambrosio said, "There is this verisimility in your history, that it is not contradictory to the little we are informed by revelation as to the origin of the globe, the order produced in the chaotic state, and the succession of living forms generated in the days of creation, which may be what philosophers call 'the epochas of nature,' for a day with omnipotence is as a thousand years, and a thousand years as one day."

"I must object," Onuphrio said, "to your interpretation of the scientific view of our new acquaintance, and to your disposition to blend them with the cosmogony of Moses. Allowing the divine origin of the book of Genesis, you must admit that it was not intended to teach the Jews systems of philosophy, but the laws of life and morals; and a great man and an exalted Christian raised his voice two centuries ago against this mode of applying and of often wresting the sense of the Scriptures to make them conformable to human fancies; 'from which,' says Lord Bacon, 'arise not only false and fantastical philosophies, but likewise heretical religions.' If the Scriptures are to be literally interpreted and systems of science found in them, Galileo Galilei merited his persecution, and we ought still to believe that the sun turns round the earth."

*AMB.*—You mistake my view, Onuphrio, if you imagine I am desirous of raising a system of geology on the book of Genesis. It cannot be doubted that the first man was created with a great variety of instinctive or inspired knowledge, which must have been likewise enjoyed by his descendants; and some of this knowledge could hardly fail to have related to the globe which he inhabited and to the objects which surrounded him. It would have been impossible for the human mind to have embraced the mysteries of creation; or to have followed the history of the moving atoms from their chaotic disorder into their arrangement in the visible universe,—to have seen dead matter assuming the forms of life and animation, and light and power arising out of death and sleep. The ideas therefore transmitted to or presented by Moses respecting the origin of the world and of man were of the most simple kind, and such as suited the early state of society. But though general and simple truths, they were divine truths, yet clothed in a language and suited to the ideas of a rude and uninstructed people. And, when I state my satisfaction in finding that they are not contradicted by the refined researches of modern geologists, I do not mean to deduce from them a system of science. I believe that light was the creation of an act of the divine will, but I do not mean to say that the words "Let there be light, and there was light," were orally spoken by the Deity; nor, do I mean to imply, that the modern discoveries respecting light are at all connected with this sublime and magnificent passage.

*ONU.*—Having resided for a long time at Edinburgh and having heard a number of discussions on the theory of Dr. Hutton, or the plutonic theory of geology, and having been exceedingly struck both by its simplicity and beauty, its harmony with existing facts and the proofs afforded to it by some beautiful chemical experiments, I do not feel disposed immediately to renounce it for the views which I have just heard explained; for the principal facts which our new acquaintance has stated are, I think, not inconsistent with the refined philosophical systems of Professor Playfair and Sir James Hall.

*THE UNKNOWN.*—I have no objection to the *refined plutonic view,* as capable of explaining many existing phenomena; indeed you must be aware that I have myself had recourse to it. What I contend against is, its application to explain the formations of the secondary rocks, which I think clearly belong to an order of facts not at all embraced by it. In the plutonic system, there is one simple and constant order assumed, which may be supposed eternal. The surface is imagined to be constantly disintegrated, destroyed, degraded and washed into the bosom of the ocean by water, and as constantly consolidated, elevated, and regenerated by fire; and the ruins of the old form the foundations of the new world. It is supposed that there are always the same types both of dead and living matter, that the remains of rocks, of vegetables and animals of one age are found imbedded in rocks raised from the bottom of the ocean in another. Now to support this view, not only the remains of living beings which at present people the globe, might be expected to be found in the oldest secondary strata, but even those of the arts of man, the most powerful and populous of its inhabitants, which is well known not to be the case. On the contrary, each stratum of the secondary rocks contains remains of peculiar and mostly now unknown species of vegetables and animals. In those strata which are deepest and which must consequently be supposed to be the earliest deposited, forms even of vegetable life are rare: shells and vegetable remains are found in the next order: the bones of fishes and oviparous reptiles exist in the following class: the remains of birds, with those of the same genera mentioned before, in the next order: those of quadrupeds of extinct species, in a still more recent class; and, it is only in the loose and slightly consolidated strata of gravel and sand, and which are usually called diluvian formations, that the remains of animals, such as now people the globe, are found with others belonging to extinct species. But in none of these formations. whether called secondary, tertiary, or diluvial, have the remains of man or any of his works been discovered. It is, I think, impossible to consider the organic remains found in any of the earlier secondary strata, the lias-limestone and its congenerous formations for instance, without being convinced, that the beings, whose organs they formed, belonged to an order of things entirely different from the present. Gigantic vegetables, more nearly allied to the palms of the equatorial countries than to any other plants, can only be imagined to have lived in a very high temperature; and the immense reptiles, the megalosauri with paddles instead of legs and clothed in mail, in size equal or even superior to the whale; and the great amphibia, plethiosauri with bodies like turtles, but furnished with necks longer than their bodies, probably to enable them to feed on vegetables growing in the shallows of the primitive ocean, seem to show a state in which low lands or extensive shores rose above an immense calm sea, and when there were no great mountain chains to produce inequalities of temperature, tempests or storms. Were the surface of the earth now to be carried down into the depths of the ocean, or were some great revolution of the waters to cover the existing land, and it was again to be elevated by fire, covered with consolidated depositions of sand or mud, how entirely different would it be in its characters from any of the secondary strata. Its great features would undoubtedly be the works of man; hewn stones and statues of bronze and marble and tools of iron, and human remains would be more common than those of animals, on the greatest part of the surface. The columns of Pæstum or of Agrigentum, or the immense iron and granite bridges of the Thames would offer a striking contrast to the bones of the crocodiles or sauri in the older rocks, or even to those of the mammoth or elephas primigenius in the diluvial strata. And, whoever dwells upon this subject must be convinced, that the present order of things and the comparatively recent existence of man as the master of the globe, is as certain as the destruction of a former and a different order and the extinction of a number of living forms which have now no types in being, and which have left their remains wonderful monuments of the revolutions of nature.

*ONU.*—I am not quite convinced by your arguments. Supposing the lands of New Holland were to be washed into the depths of the ocean, and to be raised according to the Huttonian view, as a secondary stratum, by subterraneous fire, they would contain the remains of both vegetables and animals entirely different from any found in the strata of the old continents. And, may not those peculiar formations to which you have referred, be, as it were, accidents of nature belonging to peculiar parts of the globe? And, you speak of a diluvian formation, which I conclude you would identify with that belonging to the catastrophe described in the sacred writings, in which no human remains are found. Now, you surely will not deny, that man existed at the time of this catastrophe, and he consequently may have existed at the period of the other revolutions, which are supposed to be produced in the Huttonian views by subterraneous fire.

*THE UNKNOWN.*—I have made use of the term diluvian, because it has been adopted by geologists, but without meaning to identify the cause of the formations with the deluge described in the sacred writings. I apply the term merely to signify loose and water-worn strata not at all consolidated, and deposited by an inundation of water. And in these countries which they have covered, man certainly did not exist. With respect to your argument derived from New Holland, it appears to me to be without weight. In a variety of climates, and in very distant parts of the globe, secondary strata of the same order are found, and they contain always the same kind of organic remains, which are entirely different from any of those now afforded by beings belonging to the existing order of things. The catastrophes which produced the secondary strata and diluvian depositions, could not have been local and partial phenomena, but must have extended over the whole, or a great part of the surface of the globe. The remains of similar shell fishes are found in the lime-stones of the old and new continents; the teeth of the mammoth are not uncommon in various parts of Europe; entire skeletons have been found in America, and even the skin covered with hair and the entire body of one of these enormous extinct animals has been discovered in Siberia preserved in a mass of ice. In the oldest secondary strata, there are no remains of such animals as now belong to the surface; and in the rocks which may be regarded as more recently deposited, these remains occur but rarely and with abundance of extinct species. There seems, as it were, a gradual approach to the present system of things and a succession of destructions and creations preparatory to the existence of man. It will be useless to push these arguments farther. You must allow that it is impossible to defend the proposition, that the present order of things is the ancient and constant order of nature, only modified by existing laws; and consequently, the view which you have supported must be abandoned. The monuments of extinct generations of animals are as perfect as those of extinct nations; and it would be more reasonable to suppose that the pillars and temples of Palmyra were raised by the wandering Arabs of the desert, than to imagine that the vestiges of peculiar animated forms in the strata beneath the surface belonged to the early and infant families of the beings that at present inhabit it.

*ONU.*—I am convinced;—I shall push my arguments no further, for I will not support the sophisms of that school, which supposes that living nature has undergone gradual changes by the effects of its irritabilities and appetencies; that the fish has in millions of generations ripened into the quadruped, and the quadruped into the man; and that the system of life by its own inherent powers has fitted itself to the physical changes in the system of the universe. To this absurd, vague, atheistical doctrine, I prefer even the dream of plastic powers, or that other more modern dream, that the secondary strata were *created,* filled with remains as it were of animal life to confound the speculations of our geological reasoners.

*THE UNKNOWN.*—I am glad you have not retreated into the desert and defenceless wilderness of scepticism, or of false and feeble philosophy. I should not have thought it worth my while to have followed you there; I should as soon think of arguing with the peasant who informs me that the basaltic columns of Antrim or of Staffa were the works of human art and raised by the giant Finmacoul.

At this moment, one of our servants came to inform me, that a dinner which had been preparing for us at the farm-house was ready;—we asked the stranger to do us the honour to partake of our repast; he assented, and the following conversation took place at table.

*PHIL.*—In reflecting upon our discussions this morning, I cannot help being a little surprised at their nature; we have been talking only of geological systems; when a more natural subject for our conversation would have been these magnificent temples, and an inquiry into the race by whom they were raised and the gods to whom they were dedicated. We are now treading on a spot which contains the bones of a highly civilised and powerful people; yet we are almost ignorant of the names they bore; and the period of their greatness is lost in the obscurity of time.

*AMB.*—There can be no doubt that the early inhabitants of this city were Grecians and a maritime and commercial people;—they have been supposed to belong to the Sybarite race, and the roses producing flowers twice a year in the spring and autumn in ancient times here, might sanction the idea that this balmy spot was chosen by a colony who carried luxury and refinement to the highest pitch.

*ONU.*—To attempt to form any opinion with respect to the people that anciently inhabited these now deserted plains is useless, and a vain labour. In the geological conversation which took place before dinner, some series of interesting facts were presented to us; and the monuments of nature, though they do not speak a distinct language, yet speak an intelligible one;—but with respect to Pæstum, there is neither history nor tradition to guide us; and we shall do wisely to resume our philosophical inquiries, if we have not already exhausted the patience of our new guest by doubts or objections to his views.

*THE STRANGER.*—One of you referred in our conversation this morning to a *vision*, which had some relation to the subject of our discussion, and I was promised some information on this matter.

I immediately gave a sketch of my vision, and of the opinions which had been expressed by Ambrosio on the early history of man, and the termination of our discussions on religion.

*THE STRANGER.*—I agree with Ambrosio in opinion on the subjects you have just mentioned. In my youth, I was a sceptic; and this I believe is usually the case with young persons given to general and discursive reading, and accustomed to adopt something like a mathematical form in their reasonings; and it was in considering the nature of the intellectual faculties of brutes, as compared with those of man, and in examining the nature of instinctive powers, that I became a believer. After I had formed the idea that revelation was to man in the place of an instinct, my faith constantly became stronger, and it was exalted by many circumstances I had occasion to witness in a journey that I made through Egypt and a part of Asia Minor, and by no one more than by a very remarkable dream which occurred to me in Palestine, and which, as we are now almost at the hour of the siesta, I will relate to you, though perhaps you will be asleep before I have finished it. I was walking along that deserted shore on which are the ruins of Ptolemais, one of the most ancient ports of Judæa; it was evening; the sun was sinking in the sea. I seated myself on a rock, lost in melancholy contemplations on the destinies of a spot once so famous in the history of man; the calm Mediterranean, bright in the glowing light of the west, was the only object before me. "These waves," I said to myself, "once bore the ships of the monarch of Jerusalem which were freighted with the riches of the East to adorn and honour the sanctuary of Jehovah; here are now no remains of greatness or of commerce, a few red stones and broken bricks only mark what might have been once a flourishing port, and the citadel above, raised by the Saracens, is filled with Turkish soldiers." The Janissary who was my guide, and my servant, were preparing some food for me in a tent which had been raised for the purpose, and whilst waiting for their summons to my repast, I continued my reveries, which must gradually have ended in slumber. I saw a man approaching towards me, whom, at first, I took for my janissary, but as he came nearer I found a very different figure. He was a very old man with a beard as white as snow; his countenance was dark but paler than that of an Arab, and his features stern, wild, and with a peculiar, savage expression; his form was gigantic, but his arms were withered, and there was a large scar on the left side of his face which seemed to have deprived him of an eye. He wore a black turban and black flowing robes, and there was a large chain round his waist which clanked as he moved. It occurred to me that he was one of the santons or sacred madmen so common in the East, and I retired as he approached towards me. He called out "Fly not, stranger, fear me not, I will not harm you; you shall hear my story, it may be useful to you." He spoke in Arabic, but in a peculiar dialect and to me new, yet I understood every word. "You see before you," he said, "a man who was educated a Christian, but who renounced the worship of the one supreme God for the superstitions of the pagans. I became an apostate in the reign of the emperor Julian, and I was employed by that sovereign to superintend the re-erection of the temple of Jerusalem, by which it was intended to belie the prophecies and give the death-blow to the holy religion. History has informed you of the result. My assistants were most of them destroyed in a tremendous storm; I was blasted by lightning from heaven (he raised his withered hand to his face and eye) but suffered to live, and expiate my crime in the flesh. My life has been spent in constant and severe penance, and in that suffering of the spirit produced by guilt, and is to be continued as long as any part of the temple of Jupiter, in which I renounced my faith, remains in this place. I have lived through fifteen tedious centuries, but I trust in the mercies of Omnipotence, and I hope my atonement is completed. I now stand in the dust of the pagan temple. You have just thrown the last fragment of it over the rock. My time is arrived, I come!"

As he spake the last words, he rushed towards the sea, threw himself from the rock and disappeared. I heard no struggling, and saw nothing but a gleam of light from the wave that closed above him. I was now roused by the cries of my servant and of the janissary, who were shaking my arm, and who informed me that my sleep was so sound that they were alarmed for me. When I looked on the sea, there was the same light, and I seemed to see the very spot in the wave where the old man had sunk. I was so struck by the vision, that I asked if they had not seen something dash into the wave, and if they had not heard somebody speaking to me as they arrived. Of course their answers were negative. In passing through Jerusalem and in coasting the Dead Sea I had been exceedingly struck by the present state of Judæa and the conformity of the fate of the Jewish nation to the predictions of our Saviour; I had likewise been reading Gibbon's eulogy of Julian, and his account of the attempts made by that emperor to rebuild the temple: so that the dream at such a time and in such a place was not an unnatural occurrence, yet it was so vivid, and the image of the subject of it so peculiar, that it long affected my imagination, and whenever I recurred to it, strengthened my faith.

*ONU.*—I believe all the narratives of apparitions and ghost stories are founded upon dreams of the same kind as that which occurred to you,—an ideal representation of events in the local situation in which the person is at the moment, and when the imaginary picture of the place in sleep exactly coincides with its reality in waking.

*THE STRANGER.*—I agree with you in your opinion. If my servant had not been with me, and my dream had been a little less improbable, it would have been difficult to have persuaded me that I had not been visited by an apparition.

I mentioned the dream of Brutus, and said, "His supposed evil genius appeared in his tent; had the philosophical hero dreamt that his genius had appeared to him in Rome, there could have been no delusion." I cited the similar vision, recorded of Dion before his death, by Plutarch, of a gigantic female, one of the Fates or Furies, who was supposed to have been seen by him when reposing in the portico of his palace. I referred likewise to my own vision of the beautiful female, the guardian angel of my recovery, who always seemed to me to be present at my bedside.

*AMB.*—In confirmation of this opinion of Onuphrio, I can mention many instances. I once dreamt that my door had been forced, that there were robbers in my room, and that one of them was actually putting his hand before my mouth to ascertain if I was sleeping naturally; I awoke at this moment, and was some minutes before I could be sure whether it was a dream or a reality; I felt the pressure of the bedclothes on my lips, and still in the fear of being murdered continued to keep my eyes closed and to breathe slowly, till hearing nothing and finding no motion, I ventured to open my eyes, but even then, when I saw nothing, I was not sure that my impression was a dream till I had risen from my bed and ascertained that the door was still locked.

*ONU.*—I am the only one of the party unable to record any dreams of the vivid and peculiar nature you mention from my own experience; I conclude it is owing to the dulness of my imagination. I suppose the more intense power of reverie is a symptom of the poetical temperament; and perhaps, if I possessed more enthusiasm, I should always have possessed more of the religious instinct. To adopt the idea of Philalethes of hereditary character, I fear my forefathers have not been correct in their faith.

*AMB.*—Your glory will be greater in establishing a new character, and I trust even the conversation of this day has given you an additional reason to adopt *our* faith.

Ambrosio spoke these last words with an earnestness unusual in him, and with something of a tone which marked a zeal for proselytism, and at the same time he cast his eyes on the rosary which was suspended round the neck of the stranger, and said, "I hope I am not indiscreet in saying *our* faith."

*THE STRANGER.*—I was educated in the ritual of the church of England; I belong to the church of Christ; the rosary which you see suspended round my neck, is a memorial of sympathy and respect for an illustrious man. I will, if you will allow me, give you the history of it, which I think, from the circumstances with which it is connected, you will not find devoid of interest. I was passing through France in the reign of Napoleon, by the peculiar privilege granted to a savant on my road into Italy. I had just returned from the

Holy Land, and had in my possession two or three of the rosaries which are sold to pilgrims at Jerusalem as having been suspended in the Holy Sepulchre. Pius VII. was then in imprisonment at Fontainbleau. By a special favour, on the plea of my return from the Holy Land, I obtained permission to see this venerable and illustrious pontiff. I carried with me one of my rosaries. He received me with great kindness; I tendered my services to execute any commissions, not political ones, he might think fit to entrust me with in Italy, informing him that I was an Englishman. He expressed his thanks, but declined troubling me. I told him I was just returned from the Holy Land, and bowing with great humility, offered to him my rosary from the Holy Sepulchre. He received it with a smile, touched it with his lips, gave his benediction over it and returned it into my hands, supposing of course that I was a Roman Catholic. I had meant to present it to his Holiness, but the blessing he had bestowed upon it and the touch of his lips made it a precious relic to me and I restored it to my neck, round which it has ever since been suspended. He asked me some unimportant questions respecting the state of the Christians at Jerusalem; and on a sudden, turned the subject, much to my surprise, to the destruction of the French in Russia, and in an exceedingly low tone of voice, as if afraid of being overheard, he said, "The *nefas* has long been triumphant over the *fas*, but I do not doubt that the balance of things is even now restoring, that God will vindicate his church, clear his polluted altars, and establish society upon its permanent basis of justice and faith; we shall meet again, adieu!" and he gave me his paternal blessing. It was eighteen months after this interview, that I went out with almost the whole population of Rome, to receive and welcome the triumphal entry of this illustrious father of the church into his capital. He was borne on the shoulders of the most distinguished artists headed by Canova; and never shall I forget the enthusiasm with which he was received,—it is impossible to describe the shouts of triumph and of rapture sent up to heaven by every voice. And when he gave his benediction to the people, there was an universal prostration, a sobbing and marks of emotions of joy almost like the bursting of the heart; I heard, everywhere around me, cries of "the holy Father, the most holy Father, his restoration is the work of God;" I saw tears streaming from the eyes of almost all the women about me, many of them were sobbing hysterically, and old men were weeping as if they had been children. I pressed my rosary to my breast on this occasion, and repeatedly touched with my lips that part of it which had received the kiss of the most venerable pontiff. I preserve it with a kind of hallowed feeling as the memorial of a man, whose sanctity, firmness, meekness and benevolence are an honour to his church and to human nature; and it has not only been useful to me, by its influence upon my own mind, but it has enabled me to give pleasure to others, and has I believe been sometimes beneficial in insuring my personal safety. I have often gratified the peasants of Apulia and Calabria by presenting them to kiss a rosary from the Holy Sepulchre which had been hallowed by the touch of the lips and benediction of the Pope; and, it has been even respected by and procured me a safe passage through a party of brigands who once stopped me in the passes of the Appenines.

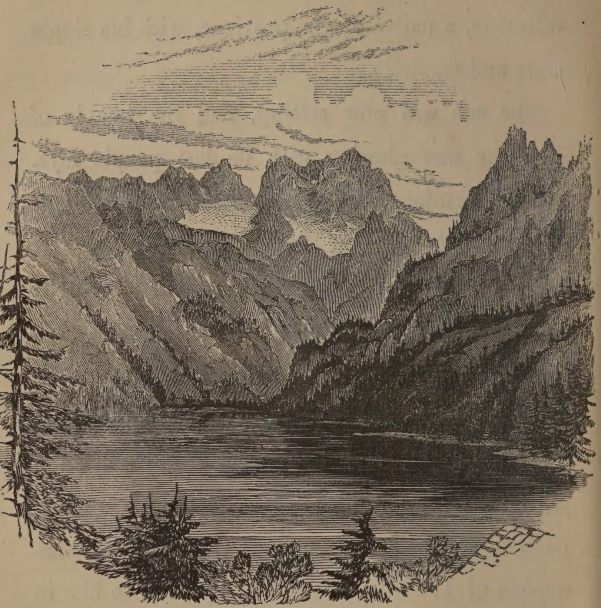
*ONU.*—The use you have made of this relic puts me in mind of a device of a very ingenious geological philosopher now living. He was on Etna and busily employed in making a collection of the lavas formed from the igneous currents of that mountain: the peasants were often troublesome to him, suspecting that he was searching for treasures; it occurred to him, to make the following speech to them; "I have been a great sinner in my youth, and as a penance I have made a vow to carry away with me pieces of every kind of stone found upon the mountain; permit me quietly to perform my pious duty, that I may receive absolution for my sins." The speech produced the desired effect; the peasants shouted "the holy man, the saint," and gave him every assistance in their power to enable him to carry off his burden, and he made his ample collections with the utmost security and in the most agreeable manner.

*THE STRANGER.*—I do not approve of pious frauds even for philosophical purposes. My rosary excited in others the same kind of feeling which it excited in my own bosom, and which I hold to be perfectly justifiable, and of which I shall never be ashamed.

*AMB.*—You must have travelled in Italy in very dangerous times; have you always been secure?

*THE STRANGER.*—Always. I have owed my security, partly, as I have said, to my rosary, but more to my dress and my acquaintance with the dialect of the natives. I have always taken with me a peasant as a guide, who has been intrusted with the small sums of money I wanted for my immediate purposes, and my baggage has been little more than a cynic philosopher would have carried with him, and when I have been unable to walk, I have trusted myself to the conduct of a vetturino, a native of the province, with his single mule and caratella.

The sun was now setting, and the temple of Neptune was glowing with its last purple rays. We were informed that our horses were waiting and that it was time for us to depart to our lodgings at Eboli. I asked the stranger to be our companion and to do us the honour to accept of a seat in our carriage: he declined the invitation, and said, "My bed is prepared in the casina here for this night, and to-morrow I proceed on a journey connected with scientific objects in the parts of Calabria, the scene of the terrible earthquakes of 1783." I held out my hand to him in parting; he gave it a strong and warm pressure, and said, "Adieu, we shall meet again."



The Austrian Alps from Gosau. Sketched by Lady Murchison. (*See page* 192.)

# DIALOGUE THE FOURTH.

## THE PROTEUS, OR IMMORTALITY.

THE impression made upon my mind by the stranger, with whom we became acquainted at Pæstum, was of the strongest and most extraordinary kind. The memory of his person, his dress, his manners, the accents of his voice, and the tone of his philosophy, for a long while haunted my imagination in a most unaccountable manner, and even formed a part of my dreams. It often occurred to me, that this was not the first time that I had seen him, and I endeavoured, but in vain, to find some type or image of him in former scenes of my life. I continually made inquiries respecting him amongst my acquaintance, but I could never be sure that any of them knew him, or even had seen him. So great were his peculiarities, that he must have escaped observation altogether, for had he entered the world at all he must have made some noise in it. I expressed so much interest on this subject, that at last it became a source of ridicule amongst my acquaintance, who often asked me, if I had not yet obtained news of my spirit-friend or ghost-seer.

After my return from Naples to Rome, I was almost immediately recalled to England by a melancholy event, the death of a very near and dear relation, and I left my two friends, Ambrosio and Onuphrio, to pursue their travels, which were intended to be of some extent and duration.

In my youth, and through the prime of manhood, I never entered London without feelings of pleasure and hope. It was to me as the grand theatre of intellectual activity, the field of every species of enterprise and exertion, the metropolis of the world of business, thought, and action. There I was sure to find the friends and companions of my youth, to hear the voice of encouragement and praise. There society of the most refined kind offered daily its banquets to the mind, with such variety that satiety had no place in them, and new objects of interest and ambition were constantly exciting attention either in politics, literature, or science.

I now entered this great city in a very different tone of mind, one of settled melancholy, not merely produced by the mournful event which recalled me to my country, but owing likewise to an entire change in the condition of my physical, moral, and intellectual being. My health was gone, my ambition was satisfied, I was no longer excited by the desire of distinction; what I regarded most tenderly was in the grave, and to take a metaphor, derived from the change produced by time in the juice of the grape, my cup of life was no longer sparkling, sweet, and effervescent;—it had lost its sweetness without losing its power, and it had become bitter.

After passing a few months in England and enjoying (as much as I could enjoy any thing) the society of the few friends who still remained alive, the desire of travel again seized me. I had preserved, amidst the wreck of time, one feeling strong and unbroken, the love of natural scenery; and this, in advanced life, formed a principal motive for my plans of conduct and action. Of all the climates of Europe, England seems to me most fitted for the activity of the mind, and the least suited to repose. The alterations of a climate so various and rapid continually awake new sensations, and the changes in the sky from dryness to moisture, from the blue ethereal to cloudiness and fogs, seem to keep the nervous system in a constant state of disturbance. In the mild climate of Nice, Naples, or Sicily, where, even in winter, it is possible to enjoy the warmth of the sunshine in the open air beneath palm trees, or amidst evergreen groves of orange trees, covered with odorous fruit and sweet-scented leaves, mere existence is a pleasure, and even the pains of disease are sometimes forgotten amidst the balmy influence of nature, and a series of agreeable and uninterrupted sensations invite to repose and oblivion. But in the changeful and tumultuous atmosphere of England, to be tranquil is a labour, and employment is necessary to ward off the attacks of ennui. The English as a nation are pre-eminently active, and the natives of no other country follow their objects with so much force, fire and constancy. And, as human powers are limited, there are few examples of very distinguished men living in this country to old age; they usually fail, droop and die before they have attained the period naturally marked for the end of human existence. The lives of our statesmen, warriors, poets, and even philosophers offer abundant proofs of the truth of this opinion. Whatever burns, consumes; ashes remain. Before the period of youth is passed, grey hairs usually cover those brows which are adorned with the civic oak or the laurel; and in the luxurious and exciting life of the man of pleasure, their tints are not even preserved by the myrtle wreath or the garland of roses from the premature winter of time.

In selecting the scenes for my new journey I was guided by my former experience. I know no country more beautiful than that which may be called the Alpine country of Austria, including the Alps of the southern Tyrol, those of Illyria, the Noric and the Julian Alps, and the Alps of Styria and Salzburg. The variety of the scenery, the verdure of the meadows and trees, the depths of the valleys, the altitude of the mountains, the clearness and grandeur of the rivers and lakes give it, I think, a decided superiority over Switzerland. And the people are far more agreeable; various in their costumes and manners, Illyrians, Italians or Germans, they have all the same simplicity of character, and are all distinguished by their love of their country, their devotion to their sovereign, the warmth and purity of their faith, their honesty, and (with very few exceptions) I may say, their great civility and courtesy to strangers.

In the prime of life I had visited this region in a society which afforded me the pleasures of intellectual friendship and the delights of refined affection. Later, I had left the burning summer of Italy and the violence of an unhealthy passion, and had found coolness, shade, repose and tranquillity there. In a still more advanced period, I had sought for and found consolation, and partly recovered my health after a dangerous illness, the consequence of labour and mental agitation;—there I had found the spirit of my early vision. I was desirous therefore of again passing some time in these scenes, in the hope of re-establishing a broken constitution; and though this hope was a feeble one, yet, at least, I expected to spend a few of the last days of life more tranquilly and more agreeably than in the metropolis of my own country. Nature never deceives us; the rocks, the mountains, the streams, always speak the same language; a shower of snow may hide the verdant woods in spring, a thunder-storm may render the blue limpid streams foul and turbulent; but these effects are rare and transient,—in a few hours, or at least days, all the sources of beauty are renovated. And, nature affords no continued trains of misfortunes and miseries such as depend upon the constitution of humanity, no hopes for ever blighted in the bud, no beings full of life, beauty and promise taken from us in the prime of youth. Her fruits are all balmy, bright and sweet; she affords none of those blighted ones so common in the life of man and so like the fabled apples of the Dead Sea, fresh and beautiful to the sight, but when tasted full of bitterness and ashes. I have already mentioned the strong effect produced on my mind by the Stranger, whom I had met so accidentally at Pæstum; the hope of seeing him again was another of my motives for wishing to leave England, and (why I know not) I had a decided presentiment that I was more likely to meet him in the Austrian states than in England, his own country.

For this journey I had one companion, an early friend and medical adviser. He had lived much in the world, had acquired a considerable fortune, had given up his profession, was now retired and sought like myself in this journey repose of mind and the pleasures derived from natural scenery. He was a man of a very powerful and acute understanding, but had less of the poetical temperament than any person whom I had ever known with similar vivacity of mind. He was a severe thinker, with great variety of information, an excellent physiologist and an accomplished naturalist. In his reasonings, he adopted the precision of a geometer, and was always upon his guard against the influence of imagination. He had passed the meridian of life, and his health was weak like my own, so that we were well suited as travelling companions, moving always slowly from place to place without hurry or fatigue. I shall call this friend Eubathes. I will say nothing of the progress of our journey through France and Germany; I shall dwell only upon that part of it which has still a strong interest for me and where events occurred that I shall never forget. We passed into the Alpine country of Austria by Lintz on the Danube, and followed the course of the Traun to Gmünden on the Traun See or lake of the Traun, where we halted for some days. If I were disposed to indulge in minute picturesque descriptions I might occupy hours with details of the various characters of the enchanting scenery in this neighbourhood. The vales have that pastoral beauty and constant verdure which is so familiar to us in England, with similar enclosures and hedge-rows and fruit and forest trees. Above are noble hills planted with beeches and oaks; mountains bound the view, here covered with pines and larches, there raising their marble crests capped with eternal snows above the clouds. The lower part of the

Traun See is always, even in the most rainy season, perfectly pellucid; and the Traun pours out of it over ledges of rocks a large and magnificent river, beautifully clear, and of the purest tint of the beryl. The fall of the Traun about ten miles below Gmünden was one of our favourite haunts. It is a cataract, which, when the river is full, may be almost compared with that of Schaffhausen for magnitude, and possesses the same peculiar characters of grandeur in the precipitous rush of its awful and overpowering waters, and of beauty in the tints of its streams and foam, and in the forms of the rocks over which it falls, and the cliffs and woods by which it is overhung. In this spot an accident, which had nearly been fatal to me, occasioned the renewal of my acquaintance in an extraordinary manner with the mysterious unknown stranger. Eubathes, who was very fond of fly-fishing, was amusing himself by catching graylings for our dinner in the stream above the fall. I took one of the boats which are used for descending the canal or lock artificially cut in the rock by the side of the fall, on which salt and wood are usually transported from Upper Austria to the Danube; and I desired two of the peasants to assist my servant in permitting the boat to descend by a rope to the level of the river below. My intention was to amuse myself by this rapid species of locomotion along the descending sluice. For some moments the boat glided gently along the smooth current, and I enjoyed the beauty of the moving scene around me, and had my eye fixed upon the bright rainbow seen upon the spray of the cataract above my head, when I was suddenly roused by a shout of alarm from my servant, and looking round I saw that the piece of wood to which the rope had been attached had given way and the boat was floating down the river at the mercy of the stream. I was not at first alarmed, for I saw that my assistants were procuring long poles with which it appeared easy to arrest the boat before it entered the rapidly descending water of the sluice, and I called out to them to use their united force to reach the longest pole across the water that I might be able to catch the end of it in my hand. And at this moment I felt perfect security; but a breeze of wind suddenly came down the valley and blew from the nearest bank, the boat was turned by it out of the side current and thrown nearer to the middle of the river, and I soon saw that I was likely to be precipitated over the cataract. My servant and the boatmen rushed into the water, but it was too deep to enable them to reach the boat; I was soon in the white water of the descending stream and my danger was inevitable. I had presence of mind enough to consider, whether my chance of safety would be greater by throwing myself out of the boat, or by remaining in it, and I preferred the latter expedient. I looked from the rainbow upon the bright sun above my head, as if taking leave for ever of that glorious luminary; I raised one pious aspiration to the divine source of light and life; I was immediately stunned by the thunder of the fall and my eyes were closed in darkness. How long I remained insensible I know not. My first recollections after this accident were of a bright light shining above me, of warmth and pressure in different parts of my body, and of the noise of the rushing cataract sounding in my ears. I seemed awakened by the light from a sound sleep, and endeavoured to recall my scattered thoughts, but in vain; I soon fell again into slumber. From this second sleep, I was awakened by a voice which seemed not altogether unknown to me, and looking upwards, I saw the bright eye and noble countenance of the Unknown Stranger whom I had met at Pæstum. I faintly articulated "I am in another world." "No," said the stranger, "you are safe in this; you are a little bruised by your fall, but you will soon be well; be tranquil and compose yourself. Your friend is here, and you will want no other assistance than he can easily give you." He then took one of my hands, and I recognised the same strong and warm pressure which I had felt from his parting salute at Pæstum. Eubathes, whom I now saw with an expression of joy and of warmth unusual to him, gave a hearty shake to the other hand, and they both said; "You must repose a few hours longer." After a sound sleep till the evening, I was able to take some refreshment, and found little inconvenience from the accident, except some bruises on the lower part of the body, and a slight swimming in the head. The next day, I was able to return to Gmünden, where I learnt from the Unknown the history of my escape, which seemed almost miraculous to me. He said, that he was often in the habit of combining pursuits of natural history with the amusements derived from rural sports, and was fishing, the day that my accident happened, below the fall of the Traun, for that peculiar species of the large *salmo* of the Danube which fortunately for me is only to be caught by very strong tackle. He saw, to his very great astonishment and alarm, the boat and my body precipitated by the fall; and was so fortunate as to entangle his hooks in a part of my dress when I had been scarcely more than a minute under water, and by the assistance of his servant, who was armed with the gaff or curved hook for landing large fish, I was safely conveyed to the shore, undressed, put into a warm bed, and by the modes of restoring suspended animation, which were familiar to him, I soon recovered my sensibility and consciousness. I was desirous of reasoning with him and Eubathes upon the state of annihilation of power and transient death which I had suffered when in the water; but they both requested me to defer those inquiries which required too profound an exertion of thought, till the effects of the shock on my weak constitution were over and my strength was somewhat reestablished; and, I was the more contented to comply with their request, as the Unknown said, it was his intention to be our companion for at least some days longer, and that his objects of pursuit lay in the very country in which we were making our summer tour. It was some weeks before I was sufficiently strong to proceed on our journey, for my frame was little fitted to bear such a trial as that which it had experienced; and considering the weak state of my body when I was immerged in the water, I could hardly avoid regarding my recovery as providential and the presence and assistance of the Stranger as in some way connected with the future destiny and utility of my life. In the middle of August we pursued our plans of travel. We first visited those romantic lakes Hallsstadt, Aussee and Töplitz See, which collect the melted snows of the higher mountains of Styria, to supply the unfailing sources of the Traun. We visited that elevated region of the Tyrol, which forms the crest of the Pusterthal, and where the same chains of glaciers send down streams to the Drave and the Adige, to the Black Sea and to the Adriatic. We remained for many days in those two magnificent valleys which afford the sources of the Save, where that glorious and abundant river rises as it were in the very bosom of beauty, leaping from its subterraneous reservoirs in the snowy mountains of Terglou and Manhardt in thundering cataracts amongst cliffs and woods into the pure and deep cerulean lakes of Wochain and Wurzen, and pursuing its course amidst pastoral meadows so ornamented with plants and trees as to look the garden of nature. The subsoil or strata of this part of Illyria are entirely calcareous and full of subterranean caverns, so that in every declivity large funnel-shaped cavities, like the craters of volcanos, may be seen, in which the waters that fall from the atmosphere are lost; and almost every lake or river has a subterraneous source, and often a subterraneous exit. The Laibach river rises twice from the limestone rock, and is twice again swallowed up by the earth before it makes its final appearance and is lost in the Save. The Zirknitz See or lake is a mass of water entirely filled and emptied by subterraneous sources; and its natural history, though singular, has in it nothing of either prodigy, mystery or wonder. The grotto of the Maddalena at Adelsberg occupied more of our attention than the Zirknitz See. I shall give the conversation that took place in that extraordinary cavern, entire, as well as I can remember it, in the words used by my companions.

*EUB.*—We must be many hundred feet below the surface; yet the temperature of this cavern is fresh and agreeable.

*THE UNKNOWN.*—This cavern has the mean temperature of the atmosphere, which is the case with all subterraneous cavities removed from the influence of the solar light and heat; and, in so hot a day in August as this, I know no more agreeable or salutary manner of taking a cold bath than in descending to a part of the atmosphere out of the influence of those causes which occasion its elevated temperature.

*EUB.*—Have you, Sir, been in this country before?

*THE UNKNOWN.*—This is the third summer that I have made it the scene of an annual visit. Independently of the natural beauties found in Illyria, and the various sources of amusement which a traveller fond of natural history may find in this region, it has had a peculiar object of interest for me in the extraordinary animals which are found in the bottom of its subterraneous cavities; I allude to the Proteus anguinus,—a far greater wonder of nature than any of those which the Baron Valvasor detailed to the Royal Society, a century and half ago, as belonging to Carniola, with far too romantic an air for a philosopher.

*PHIL.*—I have seen these animals, in passing through this country before; but I should be very glad to be better acquainted with their natural history.

*THE UNKNOWN.*—We shall soon be in that part of the grotto where they are found; and, I shall willingly communicate the little that I have been able to learn respecting their natural characters and habits.

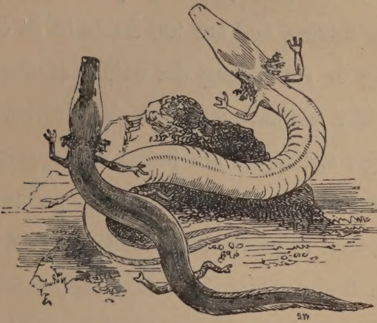
*EUB.*—The grotto now becomes really magnificent; I have seen no subterraneous cavity with so many traits of beauty and of grandeur. The irregularity of its surface, the magnitude of the masses broken in pieces which compose its sides and which seem torn from the bosom of the mountain by some great convulsion of nature, their dark colours and deep shades form a singular contrast with the beauty, uniformity, I may say, order and grace of the white stalactitical concretions which hang from the canopy above, and where the light of our torches reflected from the brilliant or transparent calcareous gems create a scene which almost looks like one produced by enchantment.

*PHIL.*—If the awful chasms of dark masses of rock surrounding us, appear like the work of demons who might be imagined to have risen from the centre of the earth, the beautiful works of nature above our heads may be compared to a scenic representation of a temple or banquet hall for fairies or genii, such as those fabled in the Arabian romances.

*THE UNKNOWN.*—A poet might certainly place here the palace of the king of the Gnomes, and might find marks of his creative power in the small lake close by, on which the flame of the torch is now falling; for, there it is that I expect to find the extraordinary animals which have been so long the objects of my attention.

*EUB.*—I see three or four creatures, like slender fish, moving on the mud below the water.

*THE UNKNOWN.*—I see them; they are the Protei; now I have them in my fishing net, and



now they are safe in the pitcher of water. At first view, you might suppose this animal to be a lizard, but it has the motions of a fish. Its head and the lower part of its body and its tail bear a strong resemblance to those of the eel; but it has no fins; and its curious branchial organs are not like the gills of fishes; they form a singular vascular structure, as you see, almost like a crest, round the throat, which may be removed without occasioning the death of the animal, who is likewise furnished with lungs. With this double apparatus for supplying air to the blood, it can live either below or above the surface of the water. Its fore-feet resemble hands, but they have only three claws or fingers, and are too feeble to be of use in grasping or supporting the weight of the animal. The hinder feet have only two claws or toes, and in the larger specimens are found so imperfect as to be almost obliterated. It has small points in place of eyes, as if to preserve the analogy of nature. It is of a fleshy whiteness and transparency in its natural state, but when exposed to light, its skin gradually becomes darker, and at last gains an olive tint. Its nasal organs appear large; and it is abundantly furnished with teeth, from which it may be concluded, that it is an animal of prey, yet in its confined state, it has never been known to eat, and it has been kept alive for many years by occasionally changing the water in which it was placed.

*EUB.*—Is this the only place in Carniola where these animals are found?

*THE UNKNOWN.*—They were first discovered here by the late Baron Zöis; but they have since been found, though rarely, at Sittich, about thirty miles distant, thrown up by water from a subterraneous cavity; and I have lately heard it reported that some individuals of the same species have been recognised in the calcareous strata in Sicily.

*EUB.*—This lake in which we have seen these animals is a very small one; do you suppose they are bred here?

*THE UNKNOWN.*—Certainly not; in dry seasons they are seldom found here, but after great rains they are often abundant. I think it cannot be doubted, that their natural residence, is in an extensive deep subterranean lake, from which in great floods they sometimes are forced through the crevices of the rocks into this place where they are found; and, it does not appear to me impossible, when the peculiar nature of the country in which we are is considered, that the same great cavity may furnish the individuals which have been found at Adelsburg and at Sittich.

*EUB.*—This is a very extraordinary view of the subject. Is it not possible that it may be the larva of some large unknown animal inhabiting these limestone cavities? Its feet are not in harmony with the rest of its organisation, and were they removed, it would have all the characters of a fish.

*THE UNKNOWN.*—I cannot suppose that they are larvæ. There is I believe in nature no instance of a transition by this species of metamorphosis, from a more perfect to a less perfect animal. The tadpole has a resemblance to a fish before it becomes a frog; the caterpillar and the maggot gain not only more perfect powers of motion on the earth in their new state, but acquire organs by which they inhabit a new element. This animal, I dare say, is much larger than we now see it, when mature in its native place; but its comparative anatomy is exceedingly hostile to the idea that it is an animal in a state of transition. It has been found of various sizes, from that of the thickness of a quill to that of the thumb, but its form of organs has been always the same. It is surely a perfect animal of a peculiar species. And it adds one instance more to the number already known of the wonderful manner in which life is produced and perpetuated in every part of our globe, even in places which seem the least suited to organised existences.—And the same infinite power and wisdom which has fitted the camel and the ostrich for the deserts of Africa, the swallow that secretes its own nest for the caves of Java, the whale for the Polar seas, and the morse and white bear for the Arctic ice, has given the Proteus to the deep and dark subterraneous lakes of Illyria,—an animal to whom the presence of light is not essential, and who can live indifferently in air and in water, on the surface of the rock, or in the depths of the mud.

*PHIL.*—It is now ten years since I first visited this spot. I was exceedingly anxious to see the Proteus, and came here with the guide in the evening of the day I arrived at Adelsberg, but though we examined the bottom of the cave with the greatest care, we could find no specimens. We returned the next morning and were more fortunate, for we discovered five close to the bank on the mud covering the bottom of the lake; the mud was smooth and perfectly undisturbed, and the water quite clear. This fact of their appearance during the night, seemed to me so extraordinary, that I could hardly avoid the fancy that they were new creations. I saw no cavities through which they could have entered, and the undisturbed state of the lake seemed to give weight to my notion. My reveries became discursive, I was carried in imagination back to the primitive state of the globe, when the great animals of the sauri kind were created under the pressure of a heavy atmosphere; and my notion on this subject was not destroyed, when I heard from a celebrated anatomist, to whom I sent the specimens I had collected, that the organisation of the spine of the Proteus was analogous to that of one of the sauri, the remains of which are found in the older secondary strata. It was said at this time that no organs of reproduction had been discovered in any of the specimens examined by physiologists, and this lent a weight to my opinion of the possibility of their being actually new creations, which I suppose you will condemn as wholly visionary and unphilosophical.

*EUB.*—From the tone in which you make your statements, I think you yourself consider them as unworthy of discussion. On such ground, eels might be considered new creations for their mature ovaria have not yet been discovered, and they come from the sea into rivers under circumstances when it is difficult to trace their course.

*THE UNKNOWN.*—The problem of the reproduction of the Proteus, like that of the common eel, is not yet solved; but ovaria have been discovered in animals of both species, and in this instance as in all others belonging to the existing order of things, Harvey's maxim of "omne vivum ab ovo" will apply.

*EUB.*—You just now said, that this animal has been long an object of attention to you; have you studied it as a comparative anatomist, in search of the solution of the problem of its reproduction?

*THE UNKNOWN.*—No; this inquiry has been pursued by much abler investigators, by Schreiber and Configliachi; my researches were made upon its respiration and the changes occasioned in water by its branchiæ.

*EUB.*—I hope they have been satisfactory.

*THE UNKNOWN.*—They proved to me at least, that not merely the oxygen dissolved in water, but likewise a part of the azote, was absorbed in the respiration of this animal.

*EUB.*—So that your researches confirm those of the French savans and Alexander von Humboldt, that in the respiration of animals which separate air from water both principles of the atmosphere are absorbed.

*PHIL.*—I have heard so many and such various opinions on the nature of the function of respiration, during my education, and since, that I should like to know what is the modern doctrine on this subject: I can hardly refer to better authority than yourself, and I have an additional reason for wishing for some accurate knowledge on this matter, having, as you well know, been the subject of an experiment in relation to it which, but for your kind and active assistance, must have terminated fatally.

*THE UNKNOWN.*—I shall gladly state what I know, which is very little. In physics and in chemistry, the science of dead matter, we possess many facts and a few principles or laws, but whenever the functions of life are considered, though the facts are numerous, yet there is, as yet, scarcely any approach to general laws; and we must usually end where we begin by confessing our entire ignorance.

*EUB.*—I will not allow this ignorance to be entire; something, undoubtedly, has been gained by the knowledge of the circulation of the blood and its aeration in the lungs,—these, if not laws, are at least fundamental principles.

*THE UNKNOWN.*—I speak only of the functions in their connexion with life. We are still ignorant of the source of animal heat, though half a century ago the chemists thought they had proved it was owing to a sort of combustion of the carbon of the blood.

*PHIL.*—As we return to our inn, I hope you will both be so good as give me your views of the nature of this function, so important to all living beings; tell me what you *know* or what you *believe*, or what others *imagine they know*.

*THE UNKNOWN.*—The powers of the organic system depend upon a continued state of change; the waste of the body produced in muscular action, perspiration, and various secretions, is made up for by the constant supply of nutritive matter to the blood by the absorbents, and by the action of the heart the blood is preserved in perpetual motion through every part of the body. In the lungs, or bronchia, the venous blood is exposed to the influence of air, and undergoes a remarkable change, being converted into arterial blood. The obvious chemical alteration of the air is sufficiently simple in this process; a certain quantity of carbon only is added to it, and it receives an addition of heat and moisture; the volumes of elastic fluid inspired and expired (making allowance for change of temperature) are the same, and if ponderable agents only were to be regarded, it would appear as if the only use of respiration were to free the blood from a certain quantity of carbonaceous matter. But it is probable that this is only a secondary object, and that the change produced by respiration upon the blood is of a much more important kind. Oxygen, in its elastic state, has properties which are very characteristic; it gives out light by compression, which is not certainly known to be the case with any other elastic fluid except those with which oxygen has entered without undergoing combustion; and from the fire it produces in certain processes, and from the manner in which it is separated by positive electricity in the gaseous state from its combinations, it is not easy to avoid the supposition, that it contains, besides its ponderable elements, some very subtile matter which is capable of assuming the form of heat and light. *My idea* is, that the common air inspired enters into the venous blood entire, in a state o dissolution, carrying with it its subtile or etherea part, which in ordinary cases of chemical change i given off; that it expels from the blood carboni acid gas and azote; and that, in the course of th circulation, its ethereal part and its ponderabl part undergo changes which belong to laws tha cannot be considered as chemical,—the etherea part probably producing animal heat and othe effects, and the ponderable part contributing t form carbonic acid and other products. Th arterial blood is necessary to all the functions o life, and it is no less connected with the irritabilit of the muscles and the sensibility of the nerve than with the performance of all the secretions.

*EUB.*—No one can be more convinced than I a of the very limited extent of our knowledge i chemical physiology; and, when I say, that havin been a disciple and friend of Dr. Black I am stil disposed to prefer his ancient view to your ne one, I wish merely to induce you to pause and t hear my reasons; they may appear insufficient t you, but I am anxious to explain them. First, then, in all known chemical changes in which oxygen gas is absorbed and carbonic acid gas formed, heat is produced: I could mention a thousand instances, from the combustion of wood or spirits of wine, to the fermentation of fruit, or the putrefaction of animal matter. This general fact, which may be almost called a law, is in favour of the view of Dr. Black. Another circumstance in favour of it is, that those animals which possess the highest temperature consume the greatest quantity of air; and, under different circumstances of action and repose, the heat is in great measure proportional to the quantity of oxygen consumed. Then, those animals which absorb the smallest quantity of air are cold blooded. Another argument in favour of Dr. Black's opinion is, the change of colour of blood from black to red; which seems to show that it loses carbon.

*THE UNKNOWN.*—With the highest respect for the memory of Dr. Black, and for the opinion of his disciple, I shall answer the arguments I have just heard. I will not allow any facts or laws from the action of dead matter to apply to living structures; the blood is a living fluid, and of this we are sure, that it does not burn in respiration. The terms warmth and cold, as applied to the blood of animals, are improper, in the sense in which they have been just used: all animals are in fact warm-blooded; and the degrees of their temperature are fitted to the circumstances under which they live; and those animals the life of which is most active, possess most heat, which may be the result of general actions, and not a particular effect of respiration. Besides, a distinguished physiologist has rendered it probable, that the animal heat depends more upon the functions of the nerves than upon any result of respiration. The argument, derived from change of colour is perfectly delusive: it would not follow, if carbon were liberated from the blood, that it must necessarily become brighter; sulphur combining with charcoal becomes a clear fluid, and a black oxide of copper becomes red in uniting with a substance which abounds in carbon.

No change in sensible qualities can ever indicate with precision the nature of chemical change.

I shall resume my view, which I cannot be said to have fully developed. When I stated that carbonic acid was formed in the venous blood in the processes of life, I meant merely to say, that this blood, in consequence of certain changes, became capable of giving off carbon and oxygen in union with each other. The moment inorganic matter enters into the composition of living organs it obeys new laws. The action of the gastric juice is chemical and it will only dissolve dead matters, and it dissolves them when they are in tubes of metal as well as in the stomach, but it has no action upon living matter. Respiration is no more a chemical process than the absorption of chyle; and the changes that take place in the lungs though they appear so simple may be very complicated; it is as little philosophical to consider them as a mere combustion of carbon, as to consider the formation of muscle from the arterial blood as crystallisation. There can be no doubt that all the powers and agencies of matter are employed in the purposes of organisation, but the phenomena of organisation can no more be referred to chemistry than those of chemistry to mechanics. As oxygen stands in that electrical relation to the other elements of animal matter which has been called electro-positive, it may be supposed, that some electrical function is exercised by oxygen in the blood; but this is a mere hypothesis. An attempt has been made, founded on experiments on the decomposition of bodies by electricity, to explain secretion by weak electrical powers, and to suppose the glands electrical organs, and even to imagine the action of the nerves dependent upon electricity. These, like all other notions of the same kind, appear to me very little refined. If electrical effects be the exhibition of certain powers belonging to matter, which is a fair supposition, then no change can take place without their being more or less concerned: but, to imagine the presence of electricity to solve phenomena, the cause of which is unknown, is merely to substitute one undefined word for another. In some animals electrical organs are found, but, then, they furnish the artillery of the animal and means of seizing its prey and of its defence. And speculations of this kind must be ranked with those belonging to some of the more superficial followers of the Newtonian philosophy, who explained the properties of animated nature by mechanical powers, and muscular action by the expansion and contraction of elastic bladders. Man, in this state of vague philosophical inquiry, was supposed a species of hydraulic machine. And when the pneumatic chemistry was invented, organic structures were soon imagined to be laboratories in which combinations and decompositions produced all the effects of living actions; then, muscular contractions were supposed to depend upon explosions like those of the detonating compounds, and the formation of blood from chyle was considered as a pure chemical solution. And, now that the progress of science has opened new and extraordinary views in electricity, these views are not unnaturally applied by speculative reasoners to solve some of the mysterious and recondite phenomena of organised beings. But the analogy is too remote and incorrect. The sources of life cannot be grasped by such machinery. To look for them in the powers of electro-chemistry is seeking the living among the dead;—that which touches will not be felt, that which sees will not be visible, that which commands sensations will not be their subject.

*PHIL.*—I conclude from what you last said, that though you are inclined to believe that some unknown subtile matter is added to the organised system by respiration, yet you would not have us believe, that this is electricity, or that there is any reason to suppose that electricity has a peculiar and special share in producing the functions of life.

*THE UNKNOWN.*—I wish to guard you against the adoption of any hypothesis on this recondite and abstruse subject. But however difficult it may be to define the exact nature of respiration, yet the effect of it and its connexions with the functions of the body are sufficiently striking. By the action of air on the blood it is fitted for the purposes of life, and from the moment that animation is marked by sensation or volition this function is performed, the punctum saliens in the ovum seems to receive as it were the breath of life in the influence of air. In the economy of the reproduction of the species of animals, one of the most important circumstances is the aeration of the ovum, and when this is not performed from the blood of the mother as in the mammalia by the placenta, there is a system for aerating as in the oviparous reptiles or fishes, which enables the air freely to pass through the receptacles in which the eggs are deposited, or the egg itself is aerated out of the body through its coats or shell, and when air is excluded, incubation or artificial heat has no effect. Fishes, which deposit their eggs in water that contains only a limited portion of air, make combinations which would seem almost the result of scientific knowledge or reason, though depending upon a more unerring principle—their instinct for preserving their offspring. Those fishes that spawn in spring or the beginning of summer and which inhabit deep and still waters, as the carp, bream, pike, tench, &c., deposit their eggs upon aquatic vegetables, which by the influence of the solar light constantly preserve the water in a state of aeration. The trout, salmon, hucho and others of the salmo genus, which spawn in the beginning or end of winter and which inhabit rivers fed by cold and rapid streams which descend from the mountains, deposit their eggs in shallows on heaps of gravel, as near as possible to the source of the stream where the water is fully combined with air; and, to accomplish this purpose they travel for hundreds of miles against the current and leap over cataracts and dams,—thus the salmo salar ascends by the Rhone and the Aar to the glaciers of Switzerland; the hucho by the Danube, the Isar, and the Save, passing through the lakes of the Tyrol and Styria to the highest torrents of the Noric and Julian Alps.

*PHIL.*—My own experience proves in the strongest manner the immediate connexion of sensibility with respiration; all that I can remember in my accident was a certain violent and painful sensation of oppression in the chest which must have been immediately succeeded by loss of sense.

*EUB.*—I have no doubt that all your suffering was over at the moment you describe; as far as sensibility is concerned you were inanimate when your friend raised you from the bottom. This distinct connexion of sensibility with the absorption of air by the blood, is I think in favour of the idea advanced by our friend, that some subtile and ethereal matter is supplied to the system in the elastic air which may be the cause of vitality.

*THE UNKNOWN.*—Softly, if you please: I must not allow you to mistake my view. I think it probable that some subtile matter is derived from the atmosphere connected with the functions of life; but nothing can be more remote from my opinion than to suppose it the cause of vitality.

*PHIL.*—This might have been fully inferred from the whole tenor of your conversation, and particularly from that expression "that which commands sensations will not be their subject;" I think I shall not mistake your views when I say, that you do not consider vitality dependent upon any material cause or principle.

*THE UNKNOWN.*—You do not. We are entirely ignorant on this subject; and I confess, in the utmost humility, my ignorance. I know there have been distinguished physiologists who have imagined that by organisation, powers not naturally possessed by matter were developed, and that sensibility was a property belonging to some unknown combination of unknown ethereal elements. But such notions appear to me unphilosophical, and the mere substitution of unknown words for unknown things. I can never believe that any division, or refinement, or subtilisation, or juxtaposition, or arrangement of the particles of matter can give to them sensibility; or, that *intelligence* can result from combinations of insensate and brute atoms. I can as easily imagine that the planets are moving by their will or design round the sun, or that a cannon-ball is reasoning in making its parabolic curve. The materialists have quoted a passage from Locke in favour of their doctrine, who seemed to doubt, "whether it might not have pleased God to bestow a power of thinking on matter." But with the highest veneration for this great reasoner, the founder of modern philosophical logic, I think there is little of his usual strength of mind in this doubt. It appears to me that he might as well have asked, whether it might not have pleased God to make a house its own tenant.

*EUB.*—I am not a professed materialist; but I think you treat rather too lightly the modest doubts of Locke on this subject. And without considering me as a partizan, you will I hope allow me to state some of the reasons which I have heard good physiologists advance in favour of that opinion to which you are so hostile. In the first accretion of the parts of animated beings they appear almost like crystallised matter, with the simplest kind of life, scarcely sensitive. The gradual operations by which they acquire new organs and new powers, corresponding to these organs, till they arrive at full maturity, forcibly strike the mind with the idea that the powers of life reside in the arrangement by which the organs are produced. Then, as there is a gradual increase of power corresponding to the increase of perfection of the organisation, so there is a gradual diminution of it connected with the decay of the body. As the imbecility of infancy corresponds to the weakness of organisation, so the energy of youth and the power of manhood are marked by its strength; and, the feebleness and dotage of old age are in the direct ratio of the decline of the perfection of the organisation; and, the mental powers in extreme old age seem destroyed at the same time with the corporeal ones, till the ultimate dissolution of the frame, when the elements are again restored to that dead nature from which they were originally derived. Then, there was a period, when the greatest philosopher, statesman, or hero that ever existed was a mere living atom—an organised form with the sole power of perception; and the combinations that a Newton formed before birth or immediately after, cannot be imagined to have possessed the slightest intellectual character. If a peculiar principle be supposed necessary to intelligence, it must exist throughout animated nature. The elephant approaches nearer to man in intellectual power, than the oyster does to the elephant; and a link of sensitive nature may be traced from the polypus to the philosopher. Now, in the polypus the sentient principle is divisible, and from one polypus or one earthworm may be formed two or three, all of which become perfect animals and have perception and volition; therefore at least, the sentient principle has this property in common with matter, that it is divisible. Then to these difficulties, add the dependence of all the higher faculties of the mind upon the state of the brain; remember that not only all the intellectual powers, but even sensibility, is destroyed by the pressure of a little blood upon the cerebellum, and the difficulties increase. Call to mind likewise the suspension of animation in cases similar to that of our friend, when there are no signs of life, and when animation returns only with the return of organic action. Surely, in all these instances, every thing which you consider as belonging to spirit appears in intimate dependence upon the arrangements and properties of matter.

*THE UNKNOWN.*—The arguments you have used, are those which are generally employed by physiologists. They have weight in appearance, but not in reality; they prove that a certain perfection of the machinery of the body is essential to the exercise of the powers of the mind,—but, they do not prove that the machine is the mind. Without the eye there can be no sensations of vision, and without the brain there could be no recollected visible ideas; but neither the optic nerve nor the brain can be considered as the percipient principle; they are but the instruments of a power which has nothing in common with them. What may be said of the nervous system may be applied to a different part of the frame; stop the motion of the heart, and sensibility and life cease, yet the living principle is not in the heart nor in the arterial blood which it sends to every part of the system. A savage who saw the operation of a number of power-looms weaving stockings cease at once on the stopping of the motion of a wheel, might well imagine that the motive force was in the wheel; he could not divine that it more immediately depended upon the steam, and ultimately upon a fire below a concealed boiler. The philosopher sees the fire which is the cause of the motion of this complicated machinery, so unintelligible to the savage; but both are equally ignorant of the *divine fire* which is the cause of the mechanism of organised structures. Profoundly ignorant on this subject, all that we can do is to give a history of our own minds. The external world, or matter, is to us in fact nothing but a heap or cluster of sensations, and in looking back to the memory of our own being, we find one principle which may be called the *monad*, or *self*, constantly present, intimately associated with a particular class of sensations, which we call our own body or organs. These organs are connected with other sensations, and move as it were with them in circles of existence, quitting for a time some trains of sensation to return to others, but the monad is always present; we can fix no beginning to its operations, we can place no limit to them. We sometimes, in sleep, lose the beginning and end of a dream, and recollect the middle of it; and one dream has no connexion with another, and yet we are conscious of an infinite variety of dreams: and there is a strong analogy for believing in an infinity of past existences, which must have had connexion: and human life may be regarded as a type of infinite and immortal life, and its succession of sleep and dreams as a type of the changes of death and birth to which from its nature it is liable. That the ideas belonging to the mind were originally gained from those classes of sensations called organs, it is impossible to deny, as it is impossible to deny that mathematical truths depend upon the signs which express them; but these signs are not themselves the truths; nor are the organs the mind. The whole history of intellect is a history of change according to a certain law; and we retain in the memory only of those changes which may be useful to us;—the child forgets what happened to it in the womb; the recollections of the infant likewise before two years are soon lost; yet, many of the habits acquired in that age are retained through life. The sentient principle gains thoughts by material instruments; and, its sensations change as those instruments change; and, in old age, the mind, as it were, falls asleep to awake to a new existence. With its present organisation, the intellect of man is naturally limited and imperfect: but, this depends upon its material machinery; and in a higher organised form, it may be imagined to possess infinitely higher powers. Were man to be immortal with his present corporeal frame, this immortality would only belong to the machinery; and with respect to acquisitions of mind, he would virtually die every two or three hundred years,—that is to say, a certain quantity of ideas only could be remembered, and the supposed immortal being would be, with respect to what had happened a thousand years ago, as the adult now is with respect to what happened in the first year of his life. To attempt to reason upon the manner in which the organs are connected with sensation would be useless: the nerves and brain have some immediate relation to these vital functions, but how they act it is impossible to say. From the rapidity and infinite variety of the phenomena of perception, it seems extremely probable that there must be in the brain and nerves matter of a nature far more subtile and refined than anything discovered in them by observation and experiment, and that the immediate connexion between the sentient principle and the body may be established by kinds of ethereal matter, which can never be evident to the senses, and which may bear the same relations to heat, light, and electricity that these refined forms or modes of existence of matter bear to the gases. Motion is most easily produced by the lighter species of matter; and yet imponderable agents, such as electricity, possess force sufficient to overturn the weightiest structures. Nothing can be farther from my meaning than to attempt any definition on this subject, nor would I embrace or give authority even to that idea of Newton, in which he supposes that the immediate cause of sensation may be in undulations of an ethereal medium. It does not, however, appear improbable to me, that some of the more refined machinery of thought may adhere, even in another state, to the sentient principle; for, though the organs of gross sensation, the nerves and brain, are destroyed by death, yet something of the more ethereal nature, which I have supposed, may be less destructible. And, I sometimes imagine, that many of those powers, which have been called instinctive, belong to the more refined clothing of the spirit; conscience, indeed, seems to have some undefined source, and may bear relation to a former state of being.

*EUB.*—All your notions are merely ingenious speculations. Revelation gives no authority to your ideas of spiritual nature; the Christian immortality is founded upon the resurrection of the body.

*THE UNKNOWN.*—This I will not allow. Even in the Mosaic history of the creation of man, his frame is made in the image of God,—that is, capable of intelligence; and the Creator breathes into it the breath of life, his own essence. Then our Saviour has said, "of the God of Abraham, of Isaac, and of Jacob." "He is not the God of the dead, but of the living." St. Paul has described the clothing of the spirit in a new and glorious body; taking the analogy from the living germ in the seed of the plant, which is not quickened till after apparent death. And the catastrophe of our planet, which, it is revealed, is to be destroyed and purified by fire, before it is fitted for the habitation of the blest, is in perfect harmony with the view I have ventured to suggest.

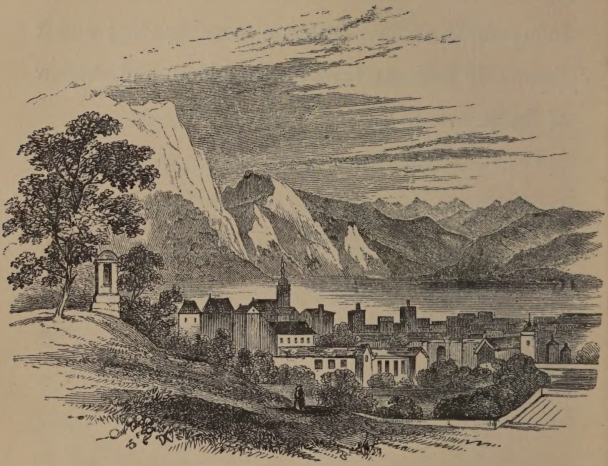
*EUB.*—I cannot make your notions coincide with what I have been accustomed to consider the meaning of holy writ. You allow every thing belonging to the material life to be dependent upon the organisation of the body, and yet you imagine the spirit after death clothed with a new body. And, in the system of rewards and punishments, this body is rendered happy or miserable for actions committed by another and extinct frame. A particular organisation may impel to improper and immoral gratification. It does not appear to me according to the principles of eternal justice, that the body of the resurrection should be punished for crimes dependent upon a conformation now dissolved and destroyed.

*THE UNKNOWN.*—Nothing is more absurd, I may say more impious, than for man, with a ken surrounded by the dense mists of sense, to *reason* respecting the decrees of eternal justice. You adopt here the same limited view that you embraced in reasoning against the indestructibility of the sentient principle in man, from the apparent division of the living principle in the polypus, not recollecting that to prove a quality can be increased or exalted, does not prove that it can be annihilated. If there be, which I think cannot be doubted, a consciousness of good and evil constantly belonging to the sentient principle in man, then rewards and punishments naturally belong to acts of this consciousness, to obedience or disobedience; and, the indestructibility of the sentient being is necessary to the decrees of eternal justice. On your view, even in *this life*, *just* punishments for crimes would be almost impossible: for the materials of which human beings are composed change rapidly, and in a few years probably not an atom of the primitive structure remains; yet even the materialist is obliged, in old age, to do penance for the sins of his youth, and does not complain of the injustice of his decrepit body, entirely changed and made stiff by time, suffering for the intemperance of his youthful flexible frame. On my idea, conscience is the frame of the mind, fitted for its probation in mortality. And this is in exact accordance with the foundations of our religion, the divine origin of which is marked no less by its history than by its harmony with the principles of our nature.

Obedience to its precepts, not only prepares for a better state of existence in another world, but is likewise calculated to make us happy here. We are constantly taught to renounce sensual pleasure and selfish gratifications, to forget our body and sensible organs, to associate our pleasures with mind, to fix our affections upon the great ideal generalisation of intelligence in the one Supreme Being. And, that we are capable of forming to ourselves an imperfect idea even of the infinite Mind, is, I think, a strong presumption of our own immortality, and of the distinct relation which our finite knowledge bears to eternal wisdom.

*PHIL.*—I am pleased with your views; they coincide with those I had formed at the time my imagination was employed upon the vision of the Colosseum, which I repeated to you, and are not in opposition with the opinions that the cool judgment and sound and humble faith of Ambrosio have led me since to embrace. The doctrine of the *materialists* was always, even in my youth, a cold, heavy, dull and insupportable doctrine to me, and necessarily tending to atheism. When I had heard with disgust, in the dissecting rooms, the plan of the physiologist, of the gradual accretion of matter and its becoming endowed with irritability, ripening into sensibility, and acquiring such organs as were necessary by its own inherent forces, and at last rising into intellectual existence; a walk into the green fields or woods, by the banks of rivers, brought back my feelings from nature, to God. I saw in all the powers of matter the instruments of the deity. The sunbeams, the breath of the zephyr awakened animation in forms prepared by divine intelligence to receive it. The insensate seed, the slumbering egg, which were to be vivified, appeared like the new born animal, works of a divine mind. I saw *love* as the creative principle in the material world; and this love only as a divine attribute. Then, my own mind, I felt connected with new sensations and indefinite hopes, a thirst for immortality. The great names of other ages and of distant nations appeared to me to be still living around me. And, even in the funeral monuments of the heroic and the great, I saw, as it were, the decree of the indestructibility of mind. These feelings, though generally considered as poetical, yet, I think, offer a sound philosophical argument in favour of the immortality of the soul. In all the habits and instincts of young animals, their feelings or movements may be traced in intimate relation to their improved perfect state; their sports have always affinities to their modes of hunting or catching their food; and young birds even in the nest show marks of fondness, which when their frames are developed become signs of actions necessary to the reproduction and preservation of the species. The desire of glory, of honour, of immortal fame and of constant knowledge, so usual in young persons of well-constituted minds, cannot I think be other than symptoms of the infinite and progressive nature of intellect—hopes, which as they cannot be gratified here, belong to a frame of mind suited to a nobler state of existence.

*THE UNKNOWN.*—Religion, whether natural or revealed, has always the same beneficial influence on the mind. In youth, in health and prosperity, it awakens feelings of gratitude and sublime love, and purifies at the same time that it exalts. But it is in misfortune, in sickness, in age, that its effects are most truly and beneficially felt; when submission in faith and humble trust in the divine will, from duties become pleasures, undecaying sources of consolation. Then, it creates powers which were believed to be extinct; and gives a freshness to the mind, which was supposed to have passed away for ever, but which is now renovated as an immortal hope. Then, it is the Pharos, guiding the wave-tost mariner to his home;—as the calm and beautiful still basins or fiords surrounded by tranquil groves and pastoral meadows to the Norwegian pilot escaping from a heavy storm in the north sea;—or as the green and dewy spot gushing with fountains to the exhausted and thirsty traveller in the midst of the desert. Its influence outlives all earthly enjoyments, and becomes stronger as the organs decay and the frame dissolves. It appears as that evening star of light in the horizon of life, which, we are sure, is to become in another season a morning star; and it throws its radiance through the gloom and shadow of death.



The Traun See or Lake of Gmünden.

# DIALOGUE THE FIFTH.

## THE CHEMICAL PHILOSOPHER.

I HAD been made religious by the conversations of Ambrosio in Italy; my faith was strengthened and exalted by the opinions of the Unknown, for whom, I had not merely that veneration awakened by exalted talents, but a strong affection, founded upon the essential benefit of the preservation of my life owing to him. I ventured, the evening after our visit to the cave of Adelsberg, to ask him some questions relating to his history and adventures. He said, to attempt to give you any idea of the formation of my character, would lead me into the history of my youth, which almost approaches to a tale of romance. The source of the little information and intelligence I possess, I must refer to a restless activity of spirit, a love of glory which ever belonged to my infancy, and a sensibility easily excited and not easily conquered. My parentage was humble; yet I can believe a traditional history of my paternal grandmother, that the origin of our family was from an old Norman stock. I found this belief upon certain feelings which I can only refer to an hereditary source,—a pride of decorum, a tact and refinement, even in boyhood, and which are contradictory to the idea of an origin from a race of peasants. Accident opened to me in early youth a philosophical career, which I pursued with success. In manhood, fortune smiled upon me and made me independent. I then really became a philosopher, and pursued my travels with the object of instructing myself and of benefiting mankind. I have seen most parts of Europe, and conversed, I believe, with all the illustrious men of science belonging to them. My life has not been unlike that of the ancient Greek sages. I have added some little to the quantity of human knowledge; and I have endeavoured to add something to the quantity of human happiness. In my early life I was a sceptic. I have informed you how I became a believer. And I constantly bless the Supreme Intelligence for the favour of some gleams of divine light which have been vouchsafed to me in this our state of darkness and doubt.

*PHIL.*—I am surprised that with your powers you did not enter into a professional career either of law or politics; you would have gained the highest honours and distinctions.

*THE UNKNOWN.*—To me there never has been a higher source of honour or distinction than that connected with advances in science. I have not possessed enough of the eagle in my character to make a direct flight to the loftiest altitudes in the social world; and I certainly never endeavoured to reach those heights by using the creeping powers of the reptile, who, in ascending, generally chooses the dirtiest path, because it is the easiest.

*EUB.*—I have often wondered that men of fortune and of rank do not apply themselves more to philosophical pursuits. They offer a delightful and enviable road to distinction, one founded upon the blessings and benefits conferred on our fellow creatures. They do not supply the same sources of temporary popularity as successes in the senate or at the bar, but the glory resulting from them is permanent, and independent of vulgar taste or caprice. In looking back to the history of the last five reigns in England, we find Boyles, Cavendishes, and Howards, who rendered these great names more illustrious by their scientific honours; but we may in vain search the aristocracy now for philosophers. And there are very few persons who pursue science with true dignity; it is followed more as connected with objects of profit than those of fame; there are fifty persons who take out patents for supposed inventions for one who makes a real discovery.

*PHIL.*—The information we have already received from you proves to me that chemistry has been your favourite pursuit. I am surprised at this. The higher mathematics and pure physics appear to me to offer much more noble objects of contemplation and fields of discovery; and, practically considered, the results of the chemist are much more humble, belonging principally to the apothecary's shop and the kitchen.

*EUB.*—I feel disposed to join you in attacking this favourite study of our friend, *but merely* to provoke him to defend it. I wish our attack would induce him to vindicate his science, and that we might enjoy a little of the sport of literary gladiators, at least, in order to call forth his skill and awaken his eloquence.

*THE UNKNOWN.*—I have no objection. Let there be a fair discussion; remember we fight only with foils, and the point of mine shall be covered with velvet. In your attack upon chemistry, Philalethes, you limited the use of it to the apothecary's shop and the kitchen. The first is an equivocal use. By introducing it into the kitchen you make it an art fundamental to all others. But if what you had stated had really been meant to be serious, it would not have deserved a reply; as it is in mere playfulness, it shall not be thrown away: I want eloquence, however, to adorn my subject; yet it is sufficiently exciting even to awaken feeling. Persons in general look at the magnificent fabric of civilised society as the result of the accumulating labour, ingenuity, and enterprise of man through a long course of ages, without attempting to define what has been owing to the different branches of human industry and science; and usually attribute to politicians, statesmen, and warriors, a much greater share than really belongs to them in the work;—what they have done is in reality little. The beginning of civilisation is the discovery of some useful arts by which men acquire property, comforts, or luxuries. The necessity or desire of preserving them leads to laws and social institutions. The discovery of peculiar arts gives superiority to particular nations; and the love of power induces them to employ this superiority to subjugate other nations, who learn their arts, and ultimately adopt their manners;—so that in reality the origin, as well as the progress, and improvement of civil society is founded in mechanical and chemical inventions. No people have ever arrived at any degree of perfection in their institutions who have not possessed in a high degree the useful and refined arts. The comparison of savage and civilised man, in fact, demonstrates the triumph of chemical and mechanical philosophy as the causes not only of physical, but ultimately even of moral improvement. Look at the condition of man in the lowest state in which we are acquainted with him. Take the native of New Holland, advanced only a few steps above the animal creation, and that principally by the use of fire,—naked, defending himself against wild beasts or killing them for food only by weapons made of wood hardened in the fire, or pointed with stones or fish-bones; living only in holes dug out of the earth, or in huts rudely constructed of a few branches of trees covered with grass; having no approach to the enjoyment of luxuries or even comforts; unable to provide for his most pressing wants; having a language scarcely articulate, relating only to the great objects of nature, or to his most pressing necessities or desires; and living solitary or in single families, unacquainted with religion, government or laws, submitted to the mercy of nature or the elements. How different is man in his highest state of cultivation; every part of his body covered with the products of different chemical and mechanical arts made not only useful in protecting him from the inclemency of the seasons, but combined in forms of beauty and variety; creating out of the dust of the earth, from the clay under his feet, instruments of use and ornament; extracting metals from the rude ore and giving to them a hundred different shapes for a thousand different purposes; selecting and improving the vegetable productions with which he covers the earth; not only subduing but taming and domesticating the wildest, the fleetest and the strongest inhabitants of the wood, the mountain and the air; making the winds carry him on every part of the immense ocean; and compelling the elements of air, water and even fire, as it were to labour for him; concentrating in small space materials which act as the thunderbolt and directing their energies so as to destroy at immense distances; blasting the rock, removing the mountain, carrying water from the valley to the hill; perpetuating thought in imperishable words, rendering immortal the exertions of genius and presenting them as common property to all awakening minds,—becoming as it were the true image of divine intelligence receiving and bestowing the breath of life in the influence of civilisation.

*EUB.*—Really you are in the poetical not the chemical chair, or rather on the tripod. We claim from you some accuracy of detail, some minute information, some proofs of what you assert. What you attribute to the chemical and mechanical arts, we might with the same propriety attribute to the fine arts, to letters, to political improvement and to those inventions of which Minerva and Apollo and not Vulcan are the patrons.

*THE UNKNOWN.*—I will be more minute. You will allow that the rendering skins insoluble in water by combining with them the astringent principle of certain vegetables is a chemical invention; and that without leather our shoes, our carriages, our equipages would be very ill made: you will permit me to say, that the bleaching and dyeing of wool and silk, cotton and flax are chemical processes; and that the conversion of them into different clothes is a mechanical invention; that the working of iron, copper, tin and lead and the other metals, and the combining them in different alloys by which almost all the instruments necessary for the turner, the joiner, the stone-mason, the ship-builder and the smith are made, are chemical inventions; even the press, to the influence of which I am disposed to attribute as much as you can do, could not have existed in any state of perfection without a metallic alloy: the combining of alkali and sand, and certain clays and flints together, to form glass and porcelain, is a chemical process: the colours which the artist employs to frame resemblances of natural objects, or to create combinations more beautiful than ever existed in nature, are derived from chemistry:—in short, in every branch of the common and fine arts, in every department of human industry, the influence of this science is felt; and we may find in the fable of Prometheus taking the flame from heaven to animate his man of clay an emblem of the effects of fire in its application to chemical purposes in creating the activity and almost the life of civil society.

*PHIL.*—It appears to me that you attribute to science what in many cases has been the result of accident. The processes of most of the useful arts, which you call chemical, have been invented and improved without any refined views, without any general system of knowledge. Lucretius attributes to accident the discovery of the fusion of the metals: a person in touching a shell-fish observes that it emits a purple liquid as a dye; hence the Tyrian purple: clay is observed to harden in the fire; and hence the invention of bricks, which could hardly fail ultimately to lead to the discovery of porcelain: even glass, the most perfect and beautiful of those manufactures you call chemical, is said to have been discovered by accident; Theophrastus states, that some merchants who were cooking on lumps of soda or natron, near the mouth of the river Belus, observed that a hard and vitreous substance was formed where the fused natron ran into the sand.

*THE UNKNOWN.*—I will readily allow that accident has had much to do with the origin of the arts as with the progress of the sciences. But it has been by scientific processes and experiments that these accidental results have been rendered applicable to the purposes of common life. Besides, it requires a certain degree of knowledge and scientific combination to understand and seize upon the facts which have originated in accident. It is certain, that in all fires, alkaline substances and sand are fused together, and clay hardened; yet for ages after the discovery of fire, glass and porcelain were unknown till some men of genius profited by scientific combination often observed but never applied. It suits the indolence of those minds which never attempt any thing, and which probably if they did attempt any thing would not succeed, to refer to accident that which belongs to genius. It is sometimes said by such persons, that the discovery of the law of gravitation was owing to accident; and a ridiculous story is told of the falling of an apple, as the cause of this discovery. As well might the invention of fluxions or the architectural wonders of the dome of St. Peter's, or the miracles of art the St. John of Raphael or the Apollo Belvedere be supposed to be owing to accidental combinations. In the progress of an art, from its rudest to its more perfect state, the whole process depends upon experiments.

Science is in fact nothing more than the refinement of common sense making use of facts already known to acquire new facts. Clays which are yellow are known to burn red; calcareous earth renders flint fusible,—the persons who have improved earthenware made their selections accordingly. Iron was discovered at least 1000 years before it was rendered malleable; and from what Herodotus says of this discovery, there can be little doubt that it was developed by a scientific worker in metals. Vitruvius tells us, that the cæruleum, a colour made of copper, which exists in perfection in all the old paintings of the Greeks and Romans and on the mummies of the Egyptians, was discovered by an Egyptian king; there is therefore every reason to believe that it was not the result of accidental combination, but of experiments made for producing or improving colours. Amongst the ancient philosophers, many discoveries are attributed to Democritus and Anaxagoras; and, connected with chemical arts, the narrative of the inventions of Archimedes alone, by Plutarch, would seem to show how great is the effect of science in creating power. In modern times, the refining of sugar, the preparation of nitre, the manufacturing of acids, salts, &c. are results of pure chemistry. Take gunpowder as a specimen; no person, but a man infinitely diversifying his processes and guided by analogy, could have made such a discovery. Look into the books of the alchemists, and some idea may be formed of the effects of experiments. It is true, these persons were guided by false views, yet they made most useful researches; and Lord Bacon has justly compared them to the husbandman, who, searching for an imaginary treasure, fertilised the soil. They may likewise be compared to persons who, looking for gold, discover the fragments of beautiful statues, which separately are of no value, and which appear of little value to the persons who found them; but which, when selected and put together by artists and their defective parts supplied, are found to be wonderfully perfect and worthy of conservation. Look to the progress of the arts, since they have been enlightened by a *system* of *science,* and observe with what rapidity they have advanced. Again, the steam-engine in its rudest form was the result of a chemical experiment. In its refined state, it required the combinations of all the most recondite principles of chemistry and mechanics, and that excellent philosopher who has given this wonderful instrument of power to civil society was led to the great improvements he made by the discoveries of a kindred genius on the heat absorbed when water becomes steam, and of the heat evolved when steam becomes water. Even the most superficial observer must allow in this case a triumph of science; for what a wonderful impulse has this invention given to the progress of the arts and manufactures in our country; how much has it diminished labour; how much has it increased the real strength of the country! Acting as it were with a thousand hands, it has multiplied our industrious population; and receiving its elements of activity from the bowels of the earth, it performs operations which formerly were painful, oppressive and unhealthy to the labourers, with regularity and constancy, and gives security and precision to the efforts of the manufacturer. And the inventions, connected with the steam-engine, at the same time that they have greatly diminished labour of body, have tended to increase power of mind and intellectual resources. Adam Smith well observes, that manufacturers are always more ingenious than husbandmen; and manufacturers who use machinery will probably always be found more ingenious than handicraft manufacturers. You spoke of porcelain as a result of accident. The improvements invented in this country, as well as those made in Germany and France, have been entirely the result of chemical experiments; the Dresden and the Sevres manufactures have been the work of men of science; and it was by multiplying his chemical researches that Wedgewood was enabled to produce at so cheap a rate those beautiful imitations which, while they surpass the ancient vases in solidity and perfection of material, equal them in elegance, variety and tasteful arrangement of their forms. In another department, the use of the electrical conductor was a pure scientific combination, and the sublimity of the discovery of the American philosopher was only equalled by the happy application he immediately made of it. In our own times, it would be easy to point out numerous instances in which great improvements and beneficial results connected with the comforts, the happiness and even life of our fellow-creatures have been the results of scientific combinations: but I cannot do this without constituting myself a judge of the works of philosophers who are still alive, whose researches are known, whose labours are respected, and who will receive from posterity praises that their contemporaries hardly dare to bestow upon them.

*EUB.*—We will allow that you have shown in many cases the utility of scientific investigations, as connected with the progress of the useful arts. But, in general, both the principles of chemistry are followed, and series of experiments performed without any view to utility; and a great noise is made if a new metal or a new substance is discovered, or, if some abstract law is made known relating to the phenomena of nature: yet, amongst the variety of new substances, few have been applied to any *trifling* use even, and the greater number have had no application at all; and, with respect to the general views of the science, it would be difficult to show that any real good had resulted from the discovery or extension of them. It does not add much to the dignity of a pursuit that those persons who have followed it for profit, have really been most useful; and that the mere artisan or chemical manufacturer has done more for society than the chemical philosopher. Besides, it has always appeared to me, that it is in the nature of this science to encourage mediocrity and to attach importance to insignificant things. Very slight chemical labours seem to give persons a claim to the title of philosopher; to have dissolved a few grains of chalk in an acid; to have shown that a very useless stone contains certain known ingredients; or that the colouring matter of a flower is soluble in acid and not in alkali, is thought by some a foundation for chemical celebrity. I once began to attend a course of chemical lectures and to read the journals containing the ephemeral productions of this science. I was dissatisfied with the nature of the evidence which the professor adopted in his demonstrations, and disgusted with the series of observations and experiments which were brought forward one month to be overturned the next. In November, there was a Zingiberic acid which in January was shown to have no existence; one year, there was a vegetable acid, which the next was shown to be the same as an acid known thirty years ago: to-day a man was celebrated for having discovered a new metal or a new alkali, and they flourished like the scenes in a new pantomime, only to disappear. Then, the great object of the hundred triflers in the science appeared to be to destroy the reputation of the three or four great men whose labours were really useful and had in them something of dignity.

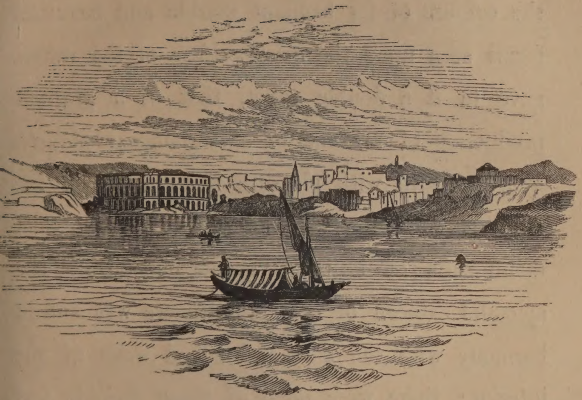
And, there not being enough of trifling results or false experiments to fill up the pages of the monthly journals, the deficiency was supplied by some crude theories or speculations of unknown persons, or by some ill-judged censure or partial praise of the editor.

*THE UNKNOWN.*—I deny in toto the accuracy of what you are advancing. I have already shown that real philosophers, not labouring for profit, have done much by their own inventions for the useful arts; and, amongst the new substances discovered, many have had immediate and very important applications. The chlorine, or oxymuriatic gas of Scheele, was scarcely known before it was applied by Berthollet to bleaching; scarcely was muriatic acid gas discovered by Priestley, when Guyton de Morveau used it for destroying contagion. Consider the varied and diversified applications of platinum, which has owed its existence as a useful metal entirely to the labours of an illustrious chemical philosopher; look at the beautiful yellow afforded by one of the new metals, chrome; consider the medical effects of iodine, in some of the most painful and disgusting maladies belonging to human nature; and, remember how short a time investigations have been made for applying the new substances. Besides, the mechanical or chemical manufacturer has rarely discovered any thing: he has merely applied what the philosopher has made known; he has merely worked upon the materials furnished to him. We have no history of the manner in which iron was rendered malleable; but we know that platinum could only have been worked by a person of the most refined chemical resources, who made multiplied experiments upon it after the most ingenious and profound views. But, waving all common utility, all vulgar applications; there is something in knowing and understanding the operation of nature; some pleasure in contemplating the order and harmony of the arrangements belonging to the terrestrial system of things. There is no absolute utility in poetry; but it gives pleasure, refines and exalts the mind. Philosophic pursuits have, likewise, a noble and independent use of this kind: and there is a double reason offered for pursuing them; for, whilst in their sublime speculations they reach to the heavens, in their application they belong to the earth; whilst they exalt the intellect, they provide food for our common wants and likewise minister to the noblest appetites and most exalted views belonging to our nature. The results of this science are not like the temples of the ancients, in which statues of the gods were placed, where incense was offered and sacrifices were performed, and which were presented to the multitude for an adoration founded upon superstitious feelings; but, they are rather like the palaces of the moderns, to be admired and used; and where the statues, which, in the ancients, raised feelings of adoration and awe, now produce only feelings of pleasure, and gratify a refined taste. It is surely a pure delight to know, how and by what processes this earth is clothed with verdure and life; how the clouds, mists, and rain are formed; what causes all the changes of this terrestrial system of things; and by what divine laws order is preserved amidst apparent confusion. It is a sublime occupation to investigate the cause of the tempest and the volcano, and to point out their use in the economy of things; to bring the lightning from the clouds and make it subservient to our experiments; to produce, as it were, a microcosm in the laboratory of art; and to measure and weigh those invisible atoms which, by their motions and changes according to laws impressed upon them by the Divine Intelligence, constitute the universe of things. The true chemical philosopher sees good in all the diversified forms of the external world. Whilst he investigates the operations of infinite power, guided by infinite wisdom, all low prejudices, all mean superstitions, disappear from his mind. He sees man an atom amidst atoms, fixed upon a point in space; and yet modifying the laws that are around him by understanding them; and gaining, as it were, a kind of dominion over time, and an empire in material space, and exerting on a scale infinitely small a power, seeming a sort of shadow or reflection of a creative energy, and which entitles him to the distinction of being made in the image of God and animated by a spark of the Divine Mind. Whilst chemical pursuits exalt the understanding, they do not depress the imagination or weaken genuine feeling. Whilst they give the mind habits of accuracy, by obliging it to attend to facts, they likewise extend its analogies. And, though conversant with the minute forms of things, they have for their ultimate end the great and magnificent objects of nature. They regard the formation of a crystal, the structure of a pebble, the nature of a clay or earth; and they apply to the causes of the diversity of our mountain chains, the appearances of the winds, thunder storms, meteors, the earthquake, the volcano, and all those phenomena which offer the most striking images to the poet and the painter. They keep alive that inextinguishable thirst after knowledge, which is one of the greatest characteristics of our nature: for every discovery opens a new field for investigation of facts—shows us the imperfection of our theories. It has justly been said, that the greater the circle of light, the greater the boundary of darkness by which it is surrounded. This strictly applies to chemical inquiries. And hence they are wonderfully suited to the progressive nature of the human intellect, which, by its increasing efforts to acquire a higher kind of wisdom, and a state in which truth is fully and brightly revealed, seems, as it were, to demonstrate its birthright to immortality.

*EUB.*—I am glad that our opposition has led you to so complete a vindication of your favourite science. I want no farther proof of its utility. I regret that I have not before made it a particular object of study.

*PHIL.*—As our friend has so fully convinced us of the importance of chemistry, I hope he will descend to some particulars as to its real nature, its objects, its instruments. I would willingly have a definition of chemistry, and some idea of the qualifications necessary to become a chemist, and of the apparatus essential for understanding what has been already done in the science, and for pursuing new inquiries.

*THE UNKNOWN.*—There is nothing more difficult than a good definition, for it is scarcely possible to express, in a few words, the abstract view of an infinite variety of facts. Dr. Black has defined chemistry to be, that science which treats of the changes produced in bodies by motions of their ultimate particles or atoms. But, this definition is hypothetical, for the ultimate particles or atoms are mere creations of the imagination. I will give you a definition, which will have the merit of novelty and which is probably general in its application. *Chemistry relates to those operations by which the intimate nature of bodies is changed, or by which they acquire new properties.* This definition will not only apply to the effects of mixture, but to the phenomena of electricity, and in short to all the changes which do not merely depend upon the motion or division of masses of matter. However difficult it may have been to have given you a definition of chemistry, it is still more difficult to give you a detail of all the qualities necessary for a chemical philosopher. I will not name as many as Athenæus has named for a cook, who, he says, ought to be a mathematician, a theoretical musician, a natural philosopher, a natural historian, &c. though you had a disposition just now to make chemistry merely subservient to the uses of the *kitchen*. But I will seriously mention some of the studies fundamental to the higher departments of this science; a man may be a good practical chemist perhaps without possessing them, but he never can become a great chemical philosopher. The person who wishes to understand the higher departments of chemistry, or to pursue them in their most interesting relations to the economy of nature, ought to be well grounded in elementary mathematics; he will oftener have to refer to arithmetic than algebra, and to algebra than to geometry. But all these sciences lend their aid to chemistry; arithmetic, in determining the proportions of analytical results, and the relative weights of the elements of bodies; algebra, in ascertaining the laws of the pressure of elastic fluids, the force of vapour as dependent upon temperature, and the effects of masses and surfaces on the communication and radiation of heat. The applications of geometry are principally limited to the determination of the crystalline forms of bodies, which constitute the most important type of their nature, and often offer useful hints for analytical researches respecting their composition. The first principles of natural philosophy, or general physics, ought not to be entirely unknown to the chemist. As the most active agents are fluids, elastic fluids, heat, light, and electricity, he ought to have a general knowledge of mechanics, hydronamics, pneumatics, optics and electricity. Latin and Greek among the dead, and French among the modern languages, are necessary; and, as the most important after French, German and Italian. In natural history and in literature, what belongs to a liberal education, such as that of our universities, is all that is required; indeed a young man who has performed the ordinary course of college studies, which are supposed fitted for common life and for refined society, has all the preliminary knowledge necessary to commence the study of chemistry. The apparatus essential to the modern chemical philosopher is much less bulky and expensive than that used by the ancients. An air pump, an electrical machine, a voltaic battery (all of which may be upon a small scale), a blowpipe apparatus, a bellows and forge, a mercurial and water gas apparatus, cups and basins of platinum and glass, and the common reagents of chemistry, are what are required. All the implements absolutely necessary may be carried in a small trunk; and some of the best and most refined researches of modern chemists have been made by means of an apparatus which might with ease be contained in a small travelling carriage, and the expense of which is only a few pounds. The facility with which chemical inquiries are carried on, and the simplicity of the apparatus, offer additional reasons, to those I have already given, for the pursuit of this science. It is not injurious to the health: the modern chemist is not like the ancient one, who passed the greater part of his time exposed to the heat and smoke of a furnace, and the unwholesome vapours of acids and alkalies and other menstrua, of which, for a single experiment, he consumed several pounds. His processes may be carried on in the drawing-room; and some of them are no less beautiful in appearance than satisfactory in their results. It was said by an author belonging to the last century, of alchemy, "that its beginning was deceit, its progress labour, and its end beggary." It may be said of modern chemistry, that its beginning is pleasure, its progress knowledge, and its objects truth and utility. I have spoken of the scientific attainments necessary for the chemical philosopher: I will say a few words of the intellectual qualities necessary for discovery, or for the advancement of the science. Amongst them patience, industry, and neatness in manipulation, and accuracy and minuteness, in observing and registering the phenomena which occur, are essential. A steady hand and a quick eye are most useful auxiliaries: but there have been very few great chemists who have preserved these advantages through life; for the business of the laboratory is often a service of danger, and the elements, like the refractory spirits of romance, though the obedient slave of the magician, yet sometimes escape the influence of his talisman and endanger his person. Both the hands and eyes of others, however, may be sometimes advantageously made use of. By often repeating a process or an observation, the errors connected with hasty operations or imperfect views are annihilated; and, provided the assistant has no preconceived notions of his own, and is ignorant of the object of his employer in making the experiment, his simple and bare detail of facts will often be the best foundation for an opinion. With respect to the higher qualities of intellect necessary for understanding and developing the general laws of the science, the same talents, I believe, are required as for making advancement in every other department of human knowledge. I need not be very minute. The imagination must be active and brilliant in seeking analogies; yet entirely under the influence of the judgment in applying them. The memory must be extensive and profound; rather, however, calling up general views of things than minute trains of thought. The mind must not be like an encyclopædia, a burthen of knowledge, but rather a critical dictionary which abounds in generalities, and points out where more minute information may be obtained. In detailing the results of experiments and in giving them to the world, the chemical philosopher should adopt the simplest style and manner: he will avoid all ornaments as something injurious to his subject, and should bear in mind the saying of the first king of Great Britain respecting a sermon which was excellent in doctrine but overcharged with poetical allusions and figurative language, "that the tropes and metaphors of the speaker were like the brilliant wild flowers in a field of corn, very pretty, but which did very much hurt the corn." In announcing even the greatest and most important discoveries, the true philosopher will communicate his details with modesty and reserve: he will rather be a useful servant of the public, bringing forth a light from under his cloak when it is needed in darkness, than a charlatan exhibiting fireworks and having a trumpeter to announce their magnificence. I see you are smiling, and think what I am saying in bad taste; yet notwithstanding, I will provoke your smiles still farther by saying a word or two on his other moral qualities. That he should be humble-minded, you will readily allow, and a diligent searcher after truth, and neither diverted from this great object by the love of transient glory or temporary popularity, looking rather to the opinion of ages, than to that of a day, and seeking to be remembered and named rather in the epochas of historians than in the columns of newspaper writers or journalists. He should resemble the modern geometricians in the greatness of his views and the profoundness of his researches, and the ancient alchemists in industry and piety. I do not mean that he should affix written prayers and inscriptions of recommendations of his processes to Providence, as was the custom of Peter Wolfe,—who was alive in my early days; but his mind should always be awake to devotional feeling; and in contemplating the variety and the beauty of the external world, and developing its scientific wonders, he will always refer to that Infinite Wisdom, through whose beneficence he is permitted to enjoy knowledge. And, in becoming wiser, he will become better; he will rise at once in the scale of intellectual and moral existence; his increased sagacity will be subservient to a more exalted faith, and in proportion as the veil becomes thinner through which he sees the causes of things, he will admire more and more the brightness of the divine light by which they are rendered visible.



Pola.

# DIALOGUE THE SIXTH.

## POLA, OR TIME.

DURING our stay in Illyria, I made an excursion by water with the Unknown—my preserver now become my friend, and Eubathes to Pola in Istria. We entered the harbour of Pola in a filucca, when the sun was setting; and I know no scene more splendid than the amphitheatre seen from the sea in this light. It appears not as a building in ruins, but like a newly erected work; and the reflection of the colours of its brilliant marble and beautiful forms seen upon the calm surface of the waters gave to it a double effect, that of a glorious production of art and of a magnificent picture. We examined with pleasure the remains of the arch of Augustus and the temple, very perfect monuments of imperial grandeur. But, the splendid exterior of the amphitheatre was not in harmony with the bare and naked walls of the interior: there were none of those durable and grand seats of marble, such as adorn the amphitheatre of Verona: from which it is probable, that the whole of the arena and conveniences for the spectators had been constructed of wood. Their total disappearance led us to reflect upon the causes of the destruction of so many of the works of the elder nations. I said;—in our metaphysical abstractions, we refer the changes, the destruction of material forms, to *time*, but there must be physical laws in nature by which they are produced; and I begged our new friend to give us some ideas on this subject, in his character of chemical philosopher. If human science, I said, has discovered the principle of the decay of things, it is possible that human art may supply means of conservation, and bestow immortality on some of the works, which appear destined by their perfection for future ages.

*THE UNKNOWN.*—I shall willingly communicate to you my views of the operation of time, philosophically considered. A great philosopher has said, man can in no way command nature, but by obeying her laws. And, in these laws, the principle of change is a principle of life. Without decay, there can be no reproduction; and, every thing belonging to the earth, whether in its primitive state, or modified by human hands, is submitted to certain and immutable laws of destruction, as permanent and universal as those which produce the planetary motions. The property, which, as far as our experience extends, universally belongs to matter, *gravitation*, is the first and most general cause of change in our terrestrial system; and, whilst it preserves the great mass of the globe in an uniform state, its influence is continually producing alterations upon the surface. The water, raised in vapour by the solar heat, is precipitated by the cool air in the atmosphere; it is carried down by gravitation to the surface and gains its mechanical force from this law. Whatever is elevated above the superficies by the powers of vegetation, or animal life, or by the efforts of man, by gravitation constantly tends to the common centre of attraction; and, the great reason of the duration of the pyramid, above all other forms, is, that it is most fitted to resist the force of gravitation. The arch, the pillar and all perpendicular constructions are liable to fall, when a degradation from chemical or mechanical causes takes place in their inferior parts. The forms upon the surface of the globe are preserved from the influence of gravitation by the attraction of cohesion, or by chemical attraction; but, if their parts had freedom of motion, they would all be levelled by this power, gravitation, and the globe would appear as a plain and smooth oblate spheroid, flattened at the poles. The attraction of cohesion or chemical attraction in its most energetic state, is not liable to be destroyed by gravitation; this power only assists the agencies of other causes of degradation. Attraction, of whatever kind, tends, as it were, to produce rest, a sort of eternal sleep in nature; the great antagonist power is *heat*. By the influence of the sun, the globe is exposed to great varieties of temperature; an addition of heat expands bodies and an abstraction of heat causes them to contract: by variation of heat, certain kinds of matter are rendered fluid, or elastic, and changes from fluids into solids, or from solids or fluids into elastic substances, and vice versâ are produced; and, all these phenomena are connected with alterations tending to the decay or destruction of bodies. It is not probable, that the mere contraction or expansion of a solid, from the subtraction or addition of heat, tends to loosen its parts; but if water exists in these parts, then its expansion, either in becoming vapour or ice, tends not only to diminish their cohesion, but to break them into fragments. There is, you know, a very remarkable property of water, its expansion by cooling, and at the time of becoming ice; and this is a great cause of destruction in the northern climates, for where ice forms in the crevices or cavities of stones, or when water which has penetrated into cement freezes, its expansion acts with the force of the lever or the screw in destroying or separating the parts of bodies. The mechanical powers of water, as rain, hail, or snow, in descending from the atmosphere, are not entirely without effect; for in acting upon the projections of solids, drops of water or particles of snow, and still more of hail, have a power of abrasion; and a very soft substance, from its mass assisting gravitation, may break a much harder one. The glacier, by its motion, grinds into powder the surface of the granite rock, and the Alpine torrents that have their origin under glaciers are always turbid, from the destruction of the rocks on which the glacier is formed. The effect of a torrent in deepening its bed will explain the mechanical agency of fluid water; though this effect is infinitely increased, and sometimes almost entirely dependent upon the solid matters which are carried down by it. An angular fragment of stone, in the course of ages, moved in the cavity of a rock, makes a deep round excavation, and is worn itself into a spherical form. A torrent of rain flowing down the side of a building carries with it the siliceous dust, or sand, or matter which the wind has deposited there, and acts upon a scale infinitely more minute, but according to the same law. The buildings of ancient Rome have not only been liable to the constant operation of the rain courses, or minute torrents produced by rains, but even the Tiber, swollen with floods of the Sabine mountains and the Appennines, has often entered into the city, and a winter seldom passes away in which the area of the Pantheon has not been filled with water, and the reflection of the cupola seen in a smooth lake below. The monuments of Egypt are perhaps the most ancient and permanent of those belonging to the earth, and in that country rain is almost unknown. And all the causes of degradation connected with the agency of water act more in the temperate climates than in the hot ones, and most of all in those countries where the inequalities of temperature are greatest. The mechanical effects of air are principally in the action of winds in assisting the operation of gravitation, and in abrading by dust, sand, stones, and atmospheric water. These effects, unless it be in the case of a building blown down by a tempest, are imperceptible in days, or even years; yet a gentle current of air carrying the siliceous sand of the desert, or the dust of a road, for ages against the face of a structure, must ultimately tend to injure it, for with infinite or unlimited duration, an extremely small cause will produce a very great effect. The mechanical agency of electricity is very limited; the effects of lightning have, however, been witnessed, even in some of the great monuments of antiquity, the Colosseum at Rome, for instance; and only last year, in a violent thunder storm, some of the marble, I have been informed, was struck from the top of one of the arches in this building, and a perpendicular rent made, of some feet in diameter. But the chemical effects of electricity, though excessively slow and gradual, yet are much more efficient in the great work of destruction. It is to the general chemical doctrines of the changes produced by this powerful agent that I must now direct your especial attention.

*EUB.*—Would not the consideration of the subject have been more distinct, and your explanations of the phenomena more simple, had you commenced by dividing the causes of change into mechanical and chemical,—if you had first considered them separately, and then their joint effects?

*THE UNKNOWN.*—The order I have adopted is not very remote from this. But I was perhaps wrong in treating first of the agency of gravitation, which owes almost all its powers to the operation of other causes. In consequence of your hint, I shall alter my plan a little, and consider first the chemical agency of water, then that of air, and lastly that of electricity. In every species of chemical change, temperature is concerned. But unless the results of volcanos and earthquakes be directly referred to this power, it has no *chemical* effect in relation to the changes ascribed to time, simply considered as heat, but its operations, which are the most important belonging to the terrestrial cycle of changes, are blended with, or bring into activity, those of other agents. One of the most distinct and destructive agencies of water depends upon its *solvent* powers, which are usually greatest when its temperature is highest. Water is capable of dissolving, in larger or smaller proportions, most compound bodies, and the calcareous and alkaline elements of stones are particularly liable to this kind of operation. When water holds in solution carbonic acid, which is always the case when it is precipitated from the atmosphere, its power of dissolving carbonate of lime is very much increased, and in the neighbourhood of great cities, where the atmosphere contains a large proportion of this principle, the solvent powers of rain upon the marble exposed to it must be greatest. Whoever examines the marble statues in the British Museum, which have been removed from the exterior of the Parthenon, will be convinced that they have suffered from this agency; and an effect distinct in the pure atmosphere and temperate climate of Athens, must be upon a higher scale in the vicinity of other great European cities, where the consumption of fuel produces carbonic acid in large quantities. Metallic substances, such as iron, copper, bronze, brass, tin and lead, whether they exist in stones, or are used for support or connexion in buildings, are liable to be corroded by water holding in solution the principles of the atmosphere; and the rust and corrosion, which are made poetically, qualities of time, depend upon the oxidating powers of water, which by supplying oxygen in a dissolved or condensed state enables the metals to form new combinations. All the vegetable substances, exposed to water and air, are liable to decay, and even the vapour in the air attracted by wood, gradually reacts upon its fibres and assists decomposition, or enables its elements to take new arrangements. Hence it is that none of the roofs of ancient buildings more than 1000 years old remain, unless it be such as are constructed of stone, as those of the Pantheon of Rome and the tomb of Theodoric at Ravenna, the cupola of which is composed of a single block of marble. The pictures of the Greek masters, which were painted on the wood of the abies, or pine of the Mediterranean, likewise, as we are informed by Pliny, owed their destruction not to a change in the colours, not to the alteration of the calcareous ground on which they were painted, but to the decay of the tablets of wood on which the intonaco or stucco was laid. Amongst the substances employed in building, wood, iron, tin and lead are most liable to decay from the operation of water; then marble, when exposed to its influence in the fluid form; brass, copper, granite, sienite and porphyry are more durable. But, in stones, much depends upon the peculiar nature of their constituent parts. When the feldspar of the granite rocks contains little alkali or calcareous earth, it is a very permanent stone; but, when in granite, porphyry or sienite, either the feldspar contains much alkaline matter, or the mica, schorl or hornblende much protoxide of iron, the action of water containing oxygen and carbonic acid on the ferruginous elements tends to produce the disintegration of the stone. The red granite, black sienite, and red porphyry of Egypt, which are seen at Rome in obelisks, columns and sarcophagi, are amongst the most durable compound stones; but, the grey granites of Corsica and Elba are extremely liable to undergo alteration, — the feldspar contains much alkaline matter and the mica and schorl much protoxide of iron. A remarkable instance of the decay of granite may be seen in the hanging tower of Pisa: whilst the marble pillars in the basement remain scarcely altered, the granite ones have lost a considerable portion of their surface, which falls off continually in scales, and exhibits every where stains from the formation of peroxide of iron. The kaolin, of clay, used in most countries for the manufacture of fine porcelain or china, is generally produced from the feldspar of decomposing granite, in which the cause of decay is the dissolution and separation of the alkaline ingredients.

*EUB.*—I have seen serpentines, basalts, and lavas, which internally were dark, and which from their weight, I should suppose, must contain oxide of iron, superficially brown or red and decomposing. Undoubtedly this was from the action of water impregnated with air upon their ferruginous elements.

*THE UNKNOWN.*—You are perfectly right. There are few compound stones, possessing a considerable specific gravity, which are not liable to change from this cause; and oxide of iron, amongst *the metallic substances anciently known*, is the most generally diffused in nature, and most concerned in the changes which take place on the surface of the globe. The chemical action of carbonic acid is so much connected with that of water, that it is scarcely possible to speak of them separately, as must be evident from what I have before said; but the same action which is exerted by the acid dissolved in water is likewise exerted by it in its elastic state, and in this case the facility with which the quantity is changed makes up for the difference of the degree of condensation. There is no reason to believe that the azote of the atmosphere has any considerable action in producing changes of the nature we are studying on the surface. The aqueous vapour, the oxygen and the carbonic acid gas, are, however, constantly in combined activity, and above all the oxygen. And, whilst water, uniting its effects with those of carbonic acid, tends to disintegrate the parts of stones, the oxygen acts upon vegetable matter. And this great chemical agent is at once necessary, in all the processes of life and in all those of decay, in which nature, as it were, takes again to herself those instruments, organs, and powers, which had for a while been borrowed and employed for the purpose or the wants of the living principle. Almost everything effected by rapid combinations in combustion, may also be effected gradually by the slow absorption of oxygen; and though the productions of the animal and vegetable kingdom are much more submitted to the power of atmospheric agents than those of the mineral kingdom; yet, as in the instances which have just been mentioned, oxygen gradually destroys the equilibrium of the elements of stones and tends to reduce into powder, to render fit for soils, even the hardest aggregates belonging to our globe. Electricity, as a chemical agent, may be considered, not only as directly producing an infinite variety of changes, but, likewise, as influencing almost all which take place. There are not two substances on the surface of the globe, that are not in different electrical relations to each other. And chemical attraction itself seems to be a peculiar form of the exhibition of electrical attraction; and, wherever the atmosphere, or water, or any part of the surface of the earth gains accumulated electricity of a different kind from the contiguous surfaces, the tendency of this electricity is to produce new arrangements of the parts of these surfaces. Thus, a positively electrified cloud, acting even at a great distance on a moistened stone, tends to attract its oxygeneous or acidiform or acid ingredients, and a negatively electrified cloud has the same effect upon its earthy, alkaline, or metallic matter; and the silent and slow operation of electricity is much more important in the economy of nature than its grand and impressive operation in lightning and thunder. The chemical agencies of water and air are assisted by those of electricity; and their joint effects, combined with those of gravitation and the mechanical ones I first described, are sufficient to account for the results of time. But the physical powers of nature in producing decay are assisted likewise by certain agencies or energies of organised beings. A polished surface of a building, or a statue, is no sooner made rough from the causes that have been mentioned, than the seeds of lichens and mosses, which are constantly floating in our atmosphere, make it a place of repose, grow and increase, and from their death, their decay and decomposition, carbonaceous matter is produced, and at length a soil is formed, in which grass can fix its roots. In the crevices of walls, where this soil is washed down, even the seeds of trees grow; and gradually as a building becomes more ruined, ivy and other parasitical plants cover it. Even the animal creation lends its aid in the process of destruction, when man no longer labours for the conservation of his works. The fox burrows amongst ruins, bats and birds nestle in the cavities in walls, the snake and the lizard likewise make them their habitation. Insects act upon a smaller scale, but by their united energies sometimes produce great effect; the ant, by establishing her colony and forming her magazines, often saps the foundations of the strongest buildings, and the most insignificant creatures triumph, as it were, over the grandest works of man. Add to these sure and slow operations, the devastations of war, the effects of the destructive zeal of bigotry, the predatory fury of barbarians seeking for concealed wealth under the foundations of buildings and tearing from them every metallic substance,—and it is rather to be wondered, at that any of the works of the great nations of antiquity are still in existence.

*PHIL.*—Your view of the causes of devastation really is a melancholy one. Nor do I see any remedy; the most important causes will always operate. Yet, supposing the constant existence of a highly civilized people, the ravages of time might be repaired, and by defending the finest works of art from the external atmosphere, their changes would be scarcely perceptible.

*EUB.*—I doubt much, whether it is for the interests of a people, that its public works should be of a durable kind. One of the great causes of the decline of the Roman empire was, that the people of the republic and of the first empire left nothing for their posterity to do; aqueducts, temples, forums, every thing was supplied, and there were no objects to awaken activity, no necessity to stimulate their inventive faculties, and hardly any wants to call forth their industry.

*THE UNKNOWN.*—At least, you must allow the importance of preserving objects of the fine arts. Almost every thing we have worthy of admiration, is owing to what has been preserved from the Greek school; and the nations, who have not possessed these works or models, have made little or no progress towards perfection. Nor does it seem that a mere imitation of nature is sufficient to produce the beautiful or perfect; but, the climate, the manners, customs and dress of the people, its genius and taste all co-operate. Such principles of conservation, as Philalethes has referred to, are obvious. No works of excellence ought to be exposed to the atmosphere; and it is a great object to preserve them in apartments of equable temperature and extremely dry. The roofs of magnificent buildings should be of materials not likely to be dissolved by water, or changed by air. Many electrical conductors should be placed so as to prevent the slow or the rapid effects of atmospheric electricity. In painting, lapis lazuli, or coloured hard glasses in which the oxides are not liable to change, should be used, and should be laid on marble, or stucco incased in stone, and no animal or vegetable substances, except pure carbonaceous matter, should be used in the pigments, and none should be mixed with the varnishes.

*EUB.*—Yet, when all is done, that can be done, in the work of conservation, it is only producing a difference in the degree of duration. And from the statements that our friend has made it is evident that none of the works of a mortal being can be eternal, as none of the combinations of a limited intellect can be infinite. The operations of nature, when slow, are no less sure; however man may, for a time, usurp dominion over her, she is certain of recovering her empire. He converts her rocks, her stones, her trees into forms of palaces, houses and ships. He employs the metal found in the bosom of the earth as instruments of power, and the sands and clays which constitute its surface as ornaments and resources of luxury. He imprisons air by water, and tortures water by fire to change or modify or destroy the natural forms of things. But, in some lustrums, his works begin to change! in a few centuries they decay and are in ruins; and, his mighty temples, framed as it were for immortal and divine purposes, his bridges formed of granite and ribbed with iron, his walls for defence, and the splendid monuments by which he has endeavoured to give eternity even to his perishable remains, are gradually destroyed. These structures, which have resisted the waves of the ocean, the tempests of the sky and the stroke of the lightning, shall yield to the operation of the dews of heaven, of frost, rain, vapour, and imperceptible atmospheric influences. As the worm devours the lineaments of his mortal beauty, so the lichens and the moss and the most insignificant plants shall feed upon his columns and his pyramids, and the most humble and insignificant insects shall undermine and sap the foundations of his colossal works, and make their habitations amongst the ruins of his palaces and the falling seats of his earthly glory.

*PHIL.*—Your history of the laws of the inevitable destruction of material forms recalls to my memory our discussion at Adelsberg. The changes of the material universe are in harmony with those which belong to the human body, and which you suppose to be the frame or machinery of the sentient principle. May we not venture to imagine, that the visible and tangible world, with which we are acquainted by our sensations, bears the same relation to the divine and infinite Intelligence, that our organs bear to our mind;—with this only difference, that in the changes of the divine system, there is no decay, there being in the order of things a perfect unity, and all the powers springing from one will, and being a consequence of that will, are perfectly and unalterably balanced. Newton seemed to apprehend, that, in the laws of the planetary motions, there was a principle which would ultimately be the cause of the destruction of the system. Laplace, by pursuing and refining the principles of our great philosopher, has proved, that what appeared sources of disorder, are in fact the perfecting machinery of the system, and that the principle of conservation is as eternal as that of motion.

*THE UNKNOWN.*—I dare not offer any speculations on this grand and awful subject. We can hardly comprehend the cause of a simple atmospheric phenomenon, such as the fall of a heavy body from a meteor; we cannot even embrace in one view the millionth part of the objects surrounding us, and yet, we have the presumption to reason upon the infinite universe, and the eternal Mind by which it was created and is governed. On these subjects, I have no confidence in reason, I trust only to faith, and as far as we ought to inquire, we have no other guide but revelation.

*PHIL.*—I agree with you, that whenever we attempt metaphysical speculations we must begin with a foundation of faith. And, being sure from revelation, that God is omnipotent and omnipresent, it appears to me no improper use of our faculties, to trace even in the natural universe, the acts of his power and the results of his wisdom, and to draw parallels from the infinite to the finite mind.

Remember we are taught that man was created in the image of God, and I think it cannot be doubted, that, in the progress of society, man has been made a great instrument by his energies and labours for improving the moral universe. Compare the Greeks and Romans with the Assyrians and Babylonians, and the ancient Greeks and Romans with the nations of modern Christendom, and it cannot, I think, be questioned, that there has been a great superiority in the latter nations, and that their improvements have been subservient to a more exalted state of intellectual and religious existence. If this little globe has been so modified by its powerful and active inhabitants, I cannot help thinking, that, in other systems, beings of a superior nature, under the influence of a divine will, may act nobler parts. We know from the sacred writings that there are intelligences of a higher nature than man, and I cannot help sometimes referring to my vision in the Colosseum, and in supposing some acts of power of those genii or seraphs similar to those which I have imagined in the higher planetary systems. There is reason to infer from astronomical observa that great changes take place in the system o fixed stars; Sir William Herschel, indeed, s to have believed, that he saw nebulous or lumi matter in the process of forming suns; and t are some astronomers who believe that stars been extinct; but it is more probable that they h disappeared from peculiar motions. It is, perh rather a poetical than a philosophical idea, ye cannot help forming the opinion, that genii seraphic intelligences may inhabit these syste and may be the ministers of the Eternal Mind, producing changes in them similar to those whi have taken place on the earth. Time is almost human word and change entirely a human ide in the system of nature we should rather s progress than change. The sun appears to sink i the ocean in darkness, but it rises in anothe hemisphere; the ruins of a city fall, but they ar often used to form more magnificent structures, a at Rome. But, even when they are destroyed, s produce only dust, nature asserts her empire r them; the vegetable world rises in constant th, and, in a period of annual successions, by labours of man, provides food, vitality and uty, upon the wrecks of monuments which were e raised for purposes of glory, but which are applied to objects of utility.

THE END.

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